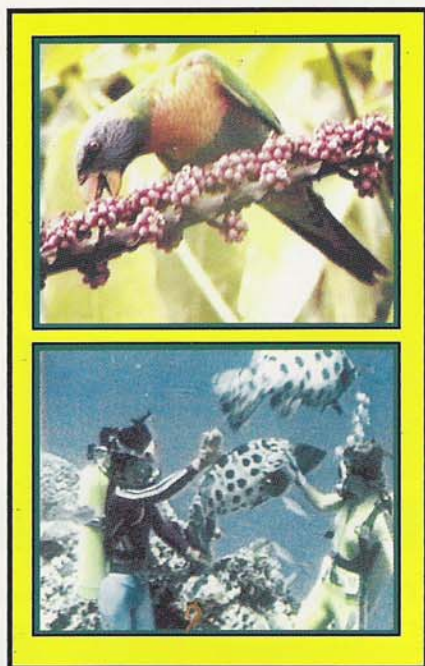


Australia's
Most Popular
Amiga
Magazine!

Australian Commodore & **AMIGA** *For Professional and Home Users* **Reviews**



**Review: VIDI 12
Frame Grabber**

**Hypercache
Speed Up Your Hard Drive**

**AMIGA CD 32
Game Console**

**Show Report
World of Commodore**



**Final Copy: Release II • Latest NEWS • HOT PD
Tutorial - Sound Digitising • Review: Hired Guns**

AMIGA 1200

THE BEST OF ALL WORLDS



USING AMIGAS

Amigas let you decide how you use them. You can use the point and click system, which we call Workbench, or you can type commands on the keyboard as on MS-DOS computers. Most people prefer Workbench, it is easy to learn and great fun to customise. With Workbench you move the pointer around the screen with the mouse and click on little pictures called icons, these represent functions you want your Amiga to do.

All Amigas can run several programs at once: so you can print a letter, sort names and address lists, listen to some music and play with a paint program all at the same time.

You can also exchange data with MS-DOS machines simply by putting the disk in the drive. Workbench will even give you an icon to make things easier.

Most Amiga programs use a universal file format called IFF. This allows one program to use another's data, for example, a Word Processor can use a picture created in a drawing program.



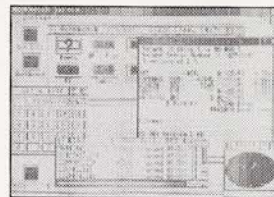
Even the software you buy for your Amiga will be easy to use and great value for money, just like the computer itself.



AMIGA SPECIALITIES

The Amiga is a great tool for work and pleasure but it excels at:

- Anything to do with graphics or video. Being video compatible means that the picture can be displayed on a T.V. or recorded on video. Having a graphics co-processor makes the action fast, whether you are reading through a large report or playing a super-action game.
- Built in digital stereo sound on the Amiga gives you concert quality reproduction. With an inexpensive add-on you can even digitise your own audio and then experiment with it on the screen.
- With the addition of optional emulators, the Amiga can also run MS-DOS * or Macintosh * software - giving you the best of all worlds.



 **Commodore**

For a supplier near you call (008) 805 067
(outside Sydney metro area) or (02) 428 7666.

Contents

Vol 10 No 8 - August 1993

Features

- 6 Show Report**
The World of Commodore Amiga Show
- 16 Vidi Amiga 12**
Capture video to disk without the usual price tag
- 20 Update: Final Copy II**
Significant new features in Release 2
- 22 Amiga Games Console at Last**
The ultimate games machine
- 24 How to get Perfect Sounds**
Achieve better results when sound digitising
- 27 A Quick Intro to Desktop Video**
Even a standard Amiga can produce exciting video footage
- 32 Hypercache Professional**
A new quick and reliable cache program

Regular

- 4 Ram Rumbles**
- 14 Notepad**
- 36 Education Column**
The new improved *Australian Graphics Atlas*
- 42 You Can CanDo - Quickshots**
A communications program and a printer utility
- 46 Deluxe Paint Tutorial**
Floating Baubles - more uses for the animbrush
- 50 C64 Column** - Reviews and letters
- 54 Amos Column** - Write better games without TOME
- 58 Down the Opal Mine** - OpalPaint's Zap function
- 60 Hot PD** - Latest in almost free software

Entertainment

- 68 That's Entertainment**
News, letters, Hall of Fame
- 74 Superfrog Solution Part 2**
- 72 Game Reviews**
Hired Guns, Trolls, Graham Gooch World Class Cricket
- 77 Adventurers Realm**
Hints & Tips, News, Trading Post, Problems, Clever Contacts

Published by: Saturday Magazine PTY. LTD.

21 Darley Road, Randwick NSW 2031

Ph: (02) 398 5111 Fax: (02) 398 5322

Editor: Andrew Farrell, Phone (02) 879 7455 Fax: (02) 816 4714

Entertainment Editor: Phil Campbell

Advertising: Ken Longshaw, (02) 817 2509 Mobile 018 230 912

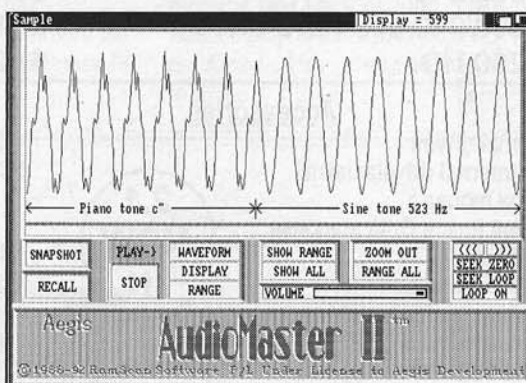
Production: Brenda Powell Layout: Tina Goins

Subscriptions / Back Issues: Darrien Perry (02) 398 5111

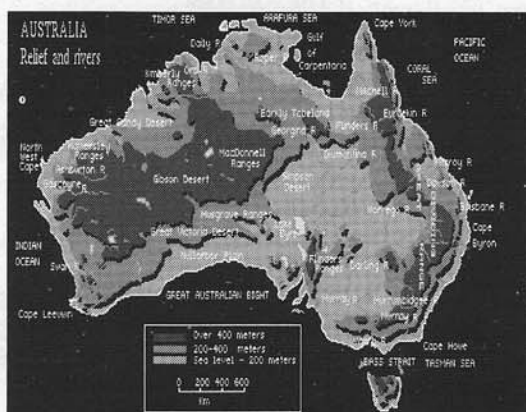
Distributed by: NETWORK Distribution Printed by: Ian Liddell Pty. Ltd.



16 Vidi Amiga 12



24 How to get Perfect Sounds



36 Australian Graphics Atlas

Amiga Peripherals at Perfect Prices

Memory Expansion

A500/512K RAM	\$49
2 meg A500/0 & clock	\$89
4 meg A500/0 plus clock	\$99
A600 1 meg w/clock	\$99
8 meg A2000/2 meg populated	\$299
A1200 Ram with 68881/co-pro 0 meg	\$295
A1200 Ram with 68881/ + clock 0 Mb	\$349
A2000/A500 2Meg Chip Ram expander	\$299
Ram/GVP A500/A2000 HD and AxRam 4 (2meg)	\$139
A2000/A500 Ram A590/A2091 (512K)	\$65
A2000/A500 Ram A590/A2091 (2 meg)	\$129
Ram A3000 static column (per 4 meg)	\$240
A4000/32 bit (per 4 meg)	CALL

A4000/030	\$2399
A4000/030/240 hard drive	\$2879
A4000/040	\$3899
A4000/040/240 hard drive	\$4495
A1200 HD	\$1169

Accessories

External drives	\$115
1.44 Internal drive/external	\$CALL
Amiga mouse	\$25
Golden Image Optical mouse	\$59
Trackball	\$49.95
Stereo Sound Sampler	\$69.99
Gigamen virtual memory	\$99
Hand scanner + OCR	\$369

2.1
NOW
IN

Maestro modems

ZXR 2400 up to 2400 BPS with fax mode	\$389
9600 XR V32 modem	\$479
144 M up to 14400 BPS/V32/V32 bis	\$529
144 FM fax data	\$579

Hard drives

A600/A1200 IDE Seagate 2.5 inch 85 meg	\$399
A600/A 1200 IDE Connor 2.5 inch 85 meg	\$479
A600/A 1200 IDE Seagate 2.5 inch 127 meg	\$559
A600/A 1200 IDE Connor 2.5 inch 127 meg	\$599
A600/1200 IDE Seagate 2.5 inch 209 meg	\$779
SCSI Quantum 52 meg 3.5 inch	\$360
SCSI Quantum 85 meg 3.5 inch	\$369
SCSI Quantum 127 meg 3.5 inch	\$459
SCSI Quantum 170 meg 3.5 inch	\$479
SCSI Quantum 240 meg 3.5 inch	\$679
SCSI Quantum 525 meg 3.5 inch	\$1499
SCSI Quantum 1.05 gb 3.5 inch	\$1999
SCSI Quantum 1.225 gb 3.5 inch	\$2399

Computer Man

PO Box E265, Perth 6001

611 Beaufort Street, Mt Lawley Perth 6050 WA

018 911 011 or 09 328 9062

Editorial



World of Commodore was a great shot in the arm for the Australian Amiga community. Although there's no arguing the show didn't quite compare with last year, there were certainly more than enough highlights to make it a truly worthwhile event. See our full report on page 6.

One thing clearly evident was the increased amount of video hardware available. Although delivery times are still measured in months, when Opal Technology manage to deliver the new Roaster add on, the PAL toaster we've all been waiting for will truly be here.

Hi-resolution display cards such as the Retina and Picasso are also heralding in a new age of large monitors excellent for desktop publishing, CAD and 3D modelling. The high end Amiga market is becoming more work station like as the years roll by. Networking is also set to improve dramatically with Commodore's own Envoy, and the locally developed QuickNET systems both almost ready for shipping.

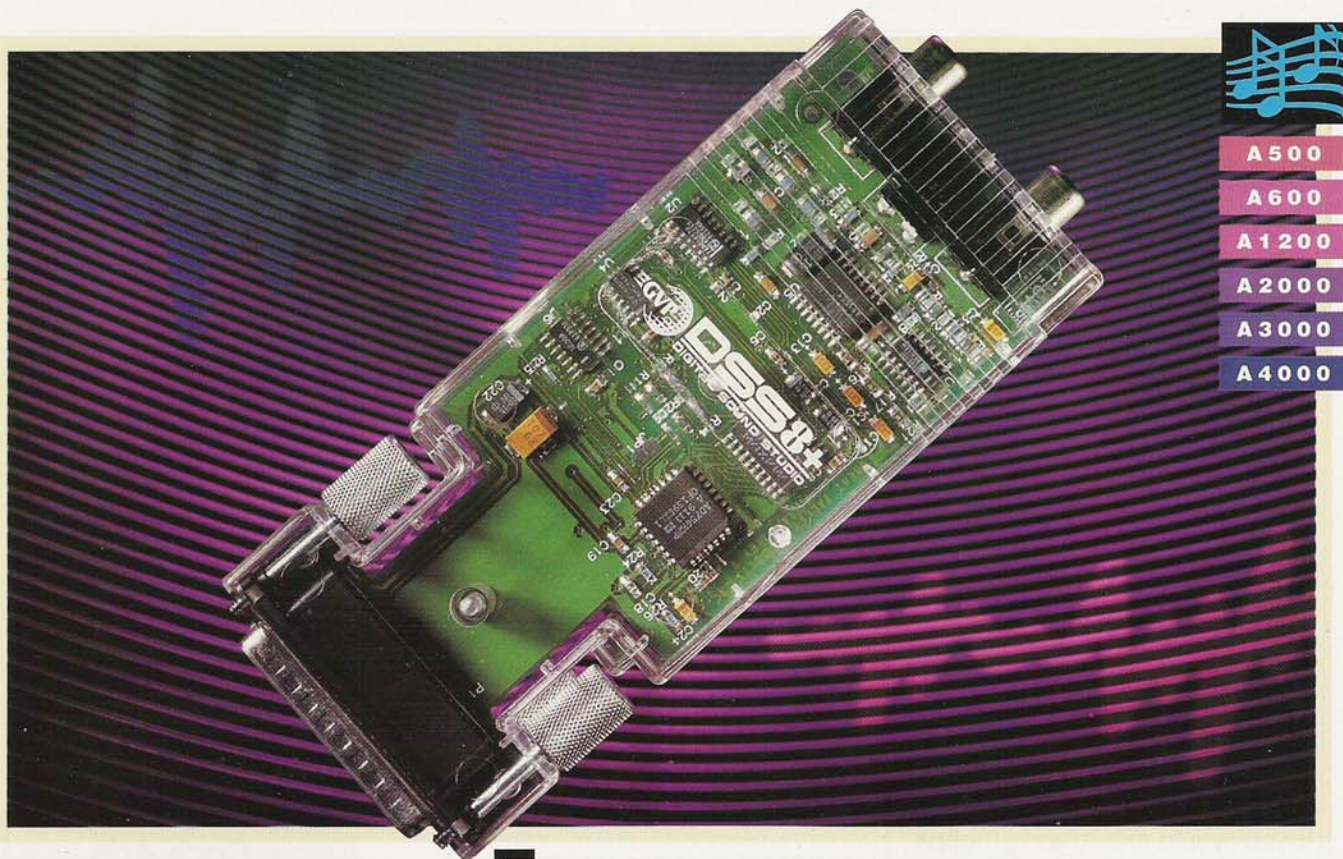
At the other end of the scale, Amiga computing continues to improve in affordability. World of Commodore saw prices tumble - a good indication of where they're headed, even if the tags were only temporary on the day.

Commodore have made some tough decisions over the past few months. I believe they've made the right ones. The PC range of Commodore machines is no more. Yes, Commodore are now concentrating on the Amiga 100%. The older machines such as the A500 and A2000 are no longer in production. However, third party support will continue for a good while to come. This is perfectly sensible considering they're around six years old.

Commodore have also had to cease production on some more recent models. This news is a little disconcerting, but once again considering the direction of Commodore, it's not at all suprising. The Amiga 3000, a machine close to the heart of many Amigans in recent times, has moved over to make way for the A4000. The 3000 had many good features which are not yet in place on the new machine - such as the hardware display enhancer and SCSI port. Hopefully these will come in time.

A lot harder to explain is the Amiga 500 PLUS and the Amiga 600. These two machines seem to have got caught in between the arrival of the AGA machines and improvements to the old models (ECS, Workbench 2.0). Although quantities of the A600 are still around, I would not recommend buying one if you hope to upgrade your Amiga much in the future. Expandability is not the best - you would be better off with an old A500. Of course, it's hard to argue with the amazing pricing Commodore are dishing out on these models.

Andrew Farrell



EVERYTHING THAT YOU EVER DREAMED AN AUDIO SAMPLER COULD BE... PLUS!

We'll say it **loud and clear**: *If you have an Amiga®, you need DSS8+™!*

There's a brand new standard in quality for 8-bit audio on the Amiga: GVP's DSS8+. We've integrated utterly-unbeatable sound with an impressive collection of features never before found in any sampler.

You can shop around to your heart's desire, but *you won't find a sampler with clearer sound or more features anywhere at any price* - why? Because the PLUS in DSS8+ means that we took everything you expect in a stereo sampler and added:

- Now over 255 settings for input gain including "Automatic". (No more time wasted in calibration!)
- Over 127 settings for our new Low Pass Filter. (Noise reduction!)
- Incredibly high Dynamic Range thanks to DSS8+'s DC Offset Adjustment. (Now hear this!)
- Right and Left channel pre-mix so you save precious RAM. (No more stereo mix-down!)
- Hardware Channel Selector for optimum performance with all Amigas. (Power to the People!)
- Separate microphone jack for simultaneous voice-over and music recording. (Home Video!)
- A solid secure fit onto the Amiga for minimal signal loss. (No more tiny screwdrivers!)

DSS8+
DIGITAL SOUND STUDIO

The PLUS doesn't stop there - it also gives you...

- Our renowned full-featured sample editing and music composition software.
- A handy Control Panel for independent control of DSS8+'s advanced features, allowing full compatibility with almost any sampler software available today.
- The best manual in the business with an easy-to-follow Digital Sound Tutorial.
- A second diskette overflowing with ready-to-play Sound Effects!

DSS8+ is the essential audio peripheral for everyone from beginners to digital sound veterans. In other words, DSS8+ is for anyone interested in a fun and simple-to-use tool for sound and music. It's perfect for jazzing up MultiMedia presentations created with Scala™, Helm™, CanDo™, MediaLink™, or AmigaVision™.

The PLUS also means Positively Affordable

In addition to being the best value in sound, DSS8+ now allows you to benefit from an unequalled offer. For a limited time, you can send in your old sampler and receive a generous discount on a new DSS8+. Call right away for details.

Take it from your ears, get the PLUS DSS8+!



Distributed In Australia By



1st Floor, 257 Hawthorn Road
Caulfield North, 3161
Telephone: (03) 532 8553
Facsimile: (03) 532 8556

UPDATE COLUMN

To all our valued customers, by the time you read this we will be at our new address:

33 Alleyne Street

Chatswood NSW 2067

Our new phone number is (02) 417 7255 and our fax number (02) 417 7099.

Amiga and C64 owners: During the move we have found some older products and also, as always happens, some of the packaging has been damaged. As it is not possible to supply these products through our retailers we have decided to offer you the possibility of buying them direct from us. Obviously, there are great bargains to be had and if you would like to save heaps of money, then ring (02) 417 6237 for a list of all these bargains. In amongst these we have not only software but also joysticks, expansion cards, books etc etc.

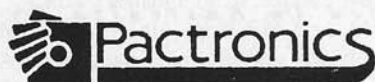
Amos Professional: We are pleased to announce the release of the Amos Compiler for Amos Pro, so rush into your local Amiga retailer to get your copy.

This will be the last update column for a few months till we get settled into our new premises, but we hope to be back with new and exciting information towards the end of this year.

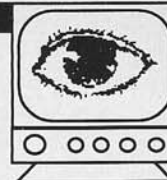
Chow for now!

Pactronics Pty Ltd, 33 Alleyne St,
Chatswood NSW 2067

Phone: (02) 417 7255 Fax (02) 417 7099



Media Watch



After years masquerading as Ram Rumbles, our regular look at the Amiga in the media has finally earned a new name. Ram Rumbles is no more and the new name, Media Watch, will now herald forth the focus of this page - Amiga in the media.

If you've seen the Amiga in the news, performing an interesting task, working hard behind the scenes, or anything that you feel somehow relates to Media Watch, send it in. Or you can modem it to our new BBS on (02) 816 4714.

Would You Believe

IBM will be making the new Atari Jaguar - a multimedia machine based on a new 64-bit RISC processor with a CD-ROM drive and 16-bit sound. The machine sounds fast, but there was little mention of software in the press release circulated recently. IBM will also help distribute the machine. An interesting announcement on the heels of Commodore's own Amiga CD 32.

In other amazing stories, a CD-ROM containing famous stories about Mars is being sent to ... you guessed it, Mars. A CD-ROM drive will not be included, however a Microdot with all the necessary instructions is stamped on the CD.

Atari vs A1200

We've been literally barraged with letters from irate readers who can't believe Atari is getting away with the comparison they've been publishing between the Atari 1040ST and the Amiga 1200. Many are saying the chart which has appeared in leading Australian newspapers as part of a heavyweight advertising campaign is downright misleading.

The full page ads stack the two machines side by side, but several glaring omissions make it very misleading, according to some. For example, the processor of each machine is listed merely as the 68000 family. Yep, they're right. But, isn't that like saying "combustion engine" in a car advertisement compar-

ing the latest Ford Falcon with a Ferrari?

"Hey, they've both got combustion engines, so they're both the same!" Sorry guys, perhaps Atari owners will fall for that one, but it seems Amiga users were quick to spot the fact the Amiga 1200 has in fact got a 68020 processor which is around five times the speed of the old 68000 in the 1040ST.

Well, that's just the tip of the iceberg Atari's seemingly unsinkable comparison chart is steaming towards. In almost every other department, the comparison either misses out key Amiga features or understates the differences. So much for fair advertising!

Apple Core Ads

Would someone like to explain the meaning of the No Problems ad which Commodore has been running in this magazine? Better still, could you come up with a better caption? Or a funnier one? Over the next three months we will give one free subscription to the best caption submitted to Media Watch. The winner will be selected by me, so make sure you include any spare out-of-print pre-plastic Australian currency you might have lying around with your entry. Anyone can enter, and entry is free. Send your entry to the magazine, clearly marked as Media Watch.

Amiga Animation

Did anyone catch the ASDG video running on the Amazing stand at WOC? Apparently *Morph Plus* has been used extensively to create morphing effects for Quantum Leap. Impressive stuff - some of it full motion morphing just like T2! There's more Amiga animation on TV these days too - if you can spot where, write in to Media Watch and you could win a subscription to ACAR or at the very least, you'll see your name in print. Better than a speeding ticket!

Andrew Farrell

A. AMIGA® — THE VIDEOGRAPHER'S VIDEO-MAKING COMPUTER, FOR ANIMATION, GRAPHICS, CHARACTER GENERATION, AUDIO, ETC.

B. BIRTHDAY — OR ANY BIG EVENT IN YOUR LIFE

C. CAMCORDER — ANY FORMAT, FOR LIVE VIDEO

D. DECK — VCR, ANY FORMAT, WITH PRE-RECORDED VIDEO

S. SOUND — ANY SOURCE, SEPERATE PRE-RECORDED, OFF VIDEOTAPE OR LIVE LINE INPUT

G. G-LOCK™ BY GVP — FOR SIMPLE TITLING OR MIXING IT ALL TOGETHER



A 500

A 600

A 1200

A 2000

A 3000

A 4000



THE BUILDING BLOCKS OF BETTER VIDEO

G-Lock™ Makes Your Video Connections With:

- Genlock features for crisp overlays of scrolling, or static titles, graphics over live video and recording to videotape with high quality results.
- Simple, intuitive mouse-driven software control panels. Full ARexx, CLI interfaces and Workbench interfaces.
- Software selection of 2 composite video inputs or 1 Y/C (S-Video) input.
- Software selection or mixing of 2 audio inputs with bass and treble control.
- Software-driven video processing amplifier, (proc amp) offering complete real-time signal processing control, including hue, brightness, saturation and more.
- Software-controlled RGB color splitter compatible with video digitizers like Newtek's Digi-View™.
- Built-in transcoder converts input video to composite, Y/C, RGB or YUV outputs.
- Full ECS/AGA support for full compatibility with new A1200 and A4000 systems!
- Compatible with popular titling software like AmigaVision™, Scala-Multimedia 200™ and Gold Disk's Video Director™.
- Separate versions available for standards around the world. Compatible with NTSC, PAL and SECAM.

Video: A Cut Above

G-Lock's six video control panels enable you to perform a wide array of special effects on still or motion video including ...

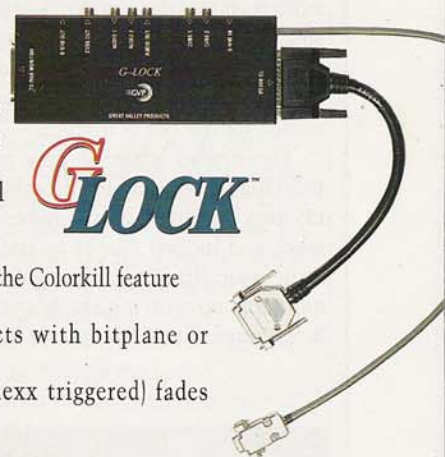
- ▶ Colorizing for unique visual effects.
- ▶ Creating your own "classic" black and white videos using the Colorkill feature
- ▶ Color filter effects.
- ▶ High-quality keying effects with bitplane or chroma keying.
- ▶ Manual or automatic (ARexx triggered) fades and cuts.

Audio: Sound Designs

G-Lock's dual-input audio panel switches, mixes and shapes sound for effects such as ...

- ▶ Combining stereo channels or separate inputs without a "Y" adaptor.
- ▶ Treble and bass equalization.
- ▶ Plus, add DSS8 or any Amiga created/modified digital audio samples to your final mix!

Professional video processing + audio processing + a powerful but simple interface + creative special effects, make G-Lock the cornerstone of your multimedia productions!



Distributed In Australia By



P O W E R
PERIPHERALS PTY LTD

1st Floor, 257 Hawthorn Road
Caulfield North, 3161
Telephone: (03) 532 8553
Facsimile: (03) 532 8556



world of
commodore

Show Report

Amiga users from all over Australia - and beyond - flocked to Sydney's Darling Harbour for the third official World of Commodore show, from the 2nd to the 4th of July.

The place was crawling with Amiga experts and amateurs alike, and the show saw the debut of hardware that'll put more Amigas into professional video studios - as well as cheap low end machines for the home market.

Those who attended may have noticed that Commodore's promised "new mystery Amiga" was nowhere to be seen, and indeed thanks to last minute stand reshuffling our show guide didn't quite line up with the exhibitors. Just to help things along, four major train lines

were closed on Saturday, but despite these glitches the show was a great success.

For most users, the highlight of the show was the dirt cheap prices being charged for the new Amiga 1200 and 4000 machines - 1200s with 2Mb of RAM and a 40Mb hard drive were going for \$849 at the Harvey Norman stand by show's end, and A4000/030s were less than \$2700 - although not the \$695 Harvey Norman accidentally advertised! The Brashs stand was even bigger, and also loaded with cut price Amiga gear.

CD-ROM

The surprise hit of the show was the A570 CD-ROM drive for the Amiga 500; it started at \$200 and was \$185 by Sunday afternoon, leaving quite a few dazed buyers wandering around the

show looking for an A500 to go with it.

Richer CD-ROM aficionados fell upon Sigmacom's \$400 external SCSI unit with two discs with cries of glee. Sigmacom were shifting quite a few of their \$650 Quantum 240Mb hard drives, too.

Australian Multimedia magazine was on sale at the Consolidated Publishing Solutions stand, and although it's still dominated by IBM compatible and Macintosh applications, the Amiga has gained a definite toehold in the professional multimedia world.

For graphics, the Amiga is ploughing ahead again. The AGA chipset gives even domestic users near-24 bit image quality, and 24 bit boards themselves are dropping in price and increasing in quality. The "24-bits and pieces" newsletter being distributed on the Desktop Utilities stand keeps Australian Amiga



SCALA

**Everybody's talking multimedia revolution.
Allow us to light the fuse.**

**MM200 Shipping
Full AGA Support**

A lot of apples were bruised when we first introduced Scala, the professional presentation package. With the new Scala MultiMedia MM200, they will be blown into oblivion!

Let us introduce a few of the features that make Scala MM200 combined with the Amiga the world's most powerful multimedia environment:

Scala EX

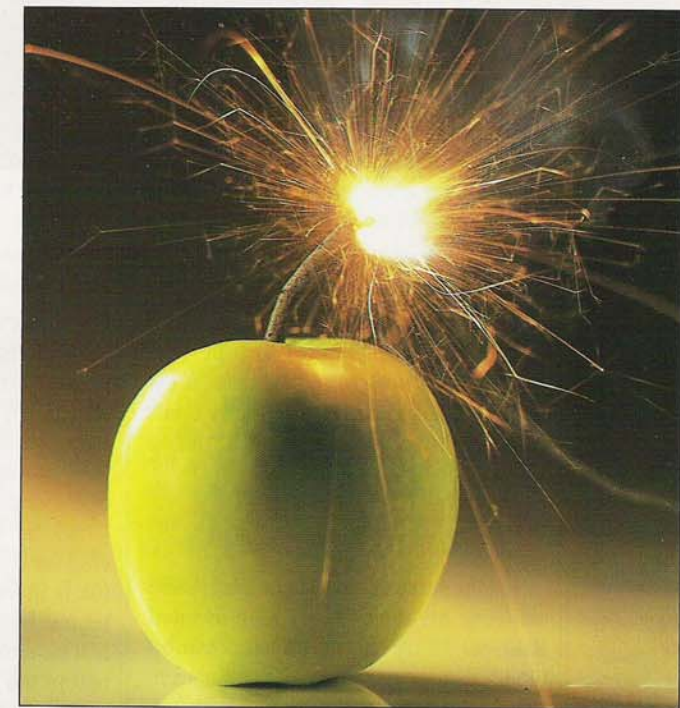
A revolutionary new plug & play system, for the integration of laserdisk, still video, MIDI, or CDTV sound in your Scala presentation. Extra EX'es, such as 24 bit graphic support and VCR control are also available.

Scala Wipes

More than 80 amazing, smooth and professional transitions provide possibilities previously unseen on the Amiga.

Scala Sound

Enhance your presentations with voice-over, music and special sound effects! Scala offers total control of recording and play-back.



Scala Shuffler

Instant viewing of your whole presentation! You can see up to 112 pages at one time. Simply shuffle them around with the mouse!

Scala Snapload

A series of advanced techniques make Scala load and display pictures and animations faster than any other package!

Scala Buttons

Creating interactive hotspots has never been so easy! Scala MM200 even includes full support of variables.

Scala LINGUA

The multimedia language Lingua with its close link to AREXX puts the advanced user in total control!

AnimLab

With this bonus program you can make your animations play up to four times faster!

The press writes:

"The word multimedia has been battered and misused... Scala on the other hand, know exactly what multimedia is and what to do with it!" *Amiga User International (UK)*

"...the best program in show business." *Amiga Format (UK)*

"Scala MM200 is the kind of software that many serious users simply can't afford to be without." *Amiga Computing (UK)*

Scala MM200

— for video titling, training, business presentations, interactive use — or any multimedia combination.



For a close look at the market leader in multimedia software, contact your dealer today!



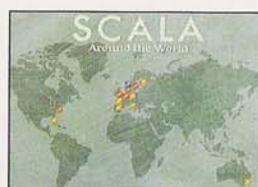
The Scala main menu.



Scroll text by Scala.



The Scala edit menu.



It's a Scala world!



The Scala Shuffler.

 **The SCALA group:**
Oslo, Copenhagen, London,
Amsterdam, Stockholm,
Washington DC.


P O W E R
PERIPHERALS PTY LTD

1st Floor, 257 Hawthorn Road, Caulfield North, 3161
Phone: (03) 532 8553 Fax: (03) 532 8556
Amiga is a registered trademark of Commodore-Amiga, Inc.

SCALA
Why make it harder?



artists up to date with the tricks of the trade, and several new graphic options were also on display at the show.

The German-made Picasso II graphic card for A2000, A3000 or A4000 machines was on show at the Color Computer Systems stand, and it basically offers AAA chipset (you know, the one that'll come after AGA) functions right now.

It's only a Zorro-II card - not Zorro-III - but its built in blitter lets it redraw screens at 30Mb per second and copy at 15Mb/s; in other words everything scrolls bleeding quickly. It runs on all processors, uses its own 1Mb of onboard RAM instead of your precious chip RAM, runs up to 1280x1024 pixels and

up to 82Hz refresh rate, and gives 16.8 million colour, 33,000 colour and chunky pixel modes, and the best part is it's supposed to be near perfectly compatible with everything, with no fancy installation procedures.

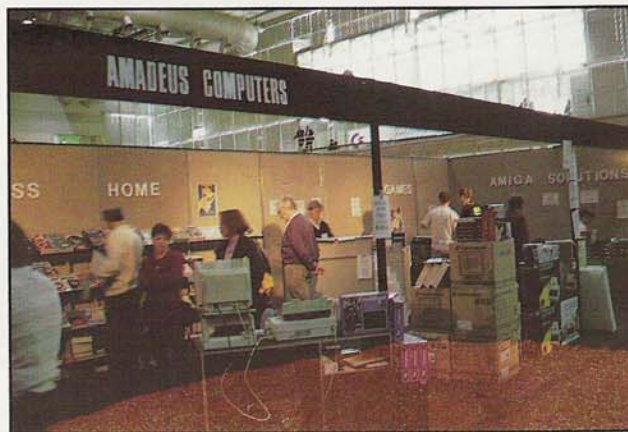
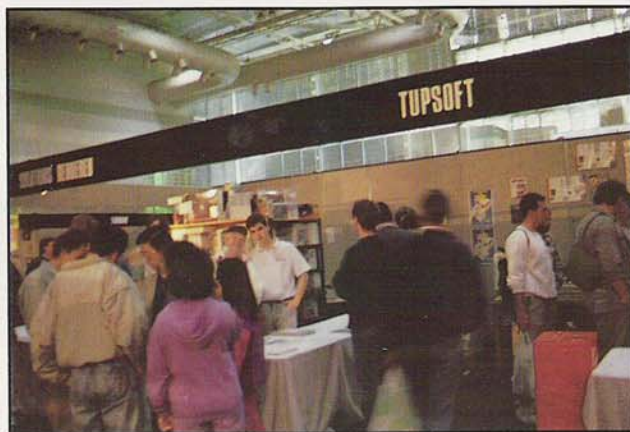
Roaster Power

On the same subject, Opal Tech were showing off their (very) long-awaited Roaster chip for the acclaimed OpalVision board, and the combination, when it's completely up and running, will grab the American Video Toaster by the scruff of the neck and punt it right out of the stadium. The Opal board runs in 24 bit RGB, supports NTSC and

PAL, has an audio mixing unit, plays animations, does chromakey, multitasks properly, has as many effects as you can dream up and comes with the brilliant *OpalPaint* software. Basically it's 90% of a monster video studio for 10% of the price.

So far the originally titled Roaster chip itself is finished and the video module is in very late testing - it may well be out by the time you read this - but it'll be two months or most likely more before the other modules come out, although they've been sourcing components for more than six months now. Opal followers, who by now could lecture Buddha on patience, will be acclimatised to this situation.

continued on page 12





A2000

A3000

A4000

IV24™ 2.0 PRODUCT LAUNCH

PHOTO COURTESY OF NASA



DO IT YOURSELF KIT



ROCKET SCIENCE MADE SIMPLE

...HIGH FLIER VERSUS "SOME ASSEMBLY REQUIRED"

Some 24 bit video boards make you pay your money and take your chances. You take a chance that they'll be up and flying in the future. You take another chance that all the "enhancements" they promised will be around tomorrow. Or that they'll be around tomorrow. Why take any chances when GVP has everything on your countdown list *today*?



The VIU Advantage:

GVP is serious about video! So IV24's Video Interface Unit gives you more choices for inputting and outputting video signals than any other Amiga® peripheral on the market. Nobody else gives you a VIU splitter, let alone one that does so much. IV24's VIU manages video from computer sources, component tape formats, composite video, even broadcast professional formats—in any combination you can imagine.

Software Mission Control

Desktop Darkroom™ • Capture images in Desktop Darkroom or bring stills in from other applications for professional processing and retouching, using filters, special effects and color separation.

MyLAD™ • Hot-switch between two video sources with 50 packaged video transitions for live action production studio effects.

Macropaint-IV24™ 2.0 • [New release—Significantly enhanced!] Paint 24 bit graphics from a stunning palette of 16.8 million colors. Then key video over graphics or graphics over video. Access ARExx scripts directly.

Caligari24™ • IV24's newest software bonus is a complete 3-D modeling/animation/rendering package. Desktop animation's future—on your Amiga today.

IV24 is on the launching pad today, awaiting your order for lift off. The decision—how to spend your video future—airborne at full thrusters...or grounded, waiting for parts?

Distributed In Australia By

POWERS
PERIPHERALS PTY LTD

1st Floor, 257 Hawthorn Road
Caulfield North, 3161
Telephone: (03) 532 8553
Facsimile: (03) 532 8556

IV24™	
Integrated video genlock.....	
1.5MB 24-bit, 16.8 M color frame buffer.....	
Real-time framegrabber/digitizer.....	
De-interlaced video flicker eliminator.....	
VIU-S™ with RGB, composite, S-VHS input/outputs.....	
Optional VIU-CT™ pro-grade component transcoder (Betacam, M-II compatible) input/outputs.....	
2-way moveable, sizeable PIP (picture inpicture) display, (video over application or application over video).....	
Digital and analog key inputs.....	
Captured image retouching/processing.....	
Video switcher transitions.....	
Real-time 24 bit paint.....	
Animation/3-D rendering.....	

V2.0 Software with
Caligari Broadcast
Included \$2399





V2.05 Kickstart
ROM \$31.30



Super Denise
\$45.95

Commodore

FULL RANGE OF COMMODORE COMPUTERS
& ACCESSORIES

Come & see
The Next Generation
of AMIGA's
A1200/A4000 on Display

CBM
**SPARE PARTS
AVAILABLE**

Best Service & Package deals please Call!

NEW!

PERSONAL - TUTOR

Personal Tutor is an individualised computer software package that coaches you at home. This program is a far more interesting & absorbing way to learn than ordinary study. And it's in your home, ready to teach, 24Hours, seven days a week!!!

DESIGNED FOR THE VCE CURRICULUM

Personal Tutor is available for: Maths, Physics,
Chemistry, Biology

Available only for years 11 & 12

Call For **FREE** information Sheet



**ADD AN EXTRA
HARD DRIVE TO
YOUR A1200
(FREE INSTALLATION!)**

40Mb.....\$279-
85Mb.....\$549-
120Mb.....\$649-

If you have any questions please give us a call!

LOOK!



GREAT VALLEY PRODUCTS

DSS+
8Bit Sound Sampler
Suit AMIGA 500, 600, 1200, 2000, 3000, 4000

\$199.00

**NEW
ENHANCED
MODEL!**



AMIGA SOFTWARE



AMOS 3D	\$ 88.00	Image FX	(OVC) \$399.00
AMOS Professional	\$159.00	Imagemaster Professional V9.50	(OVC) \$ CALL
AMOS Professional Compiler	\$ CALL	Imagine 2 PAL	(OVC) \$279.00
ATalk III	\$ 59.95	Infofile	\$ 50.00
Aladdin 4D	(OVC) \$434.95	Intro Cad Plus	\$ 79.95
Ami-Back 2.0	\$ 67.95	KARA Anim Fonts 4	\$ 57.50
Ami-Back Plus Tools	\$119.95	KARA Anim Fonts 5	\$ 57.50
Ami-Back Tools	\$ 69.95	KARA Fonts Headlines 2	\$ 69.95
Amiga Vision Professional	\$ 59.95	KARA Head Line Fonts 3	\$ 74.95
Anim Workshop	\$ 74.95	KARA Head Line Fonts 4	\$ 74.95
Art Department Conversion Pack	\$ 84.95	KARA Star Fields	\$ 59.95
Art Department Epson Drivers	\$179.00	Kind Words 3	\$119.95
Art Department Pro 2.3	(OVC) \$259.00	Mac To Dos	\$135.00
Art Department Pro Control	\$ NEW	Mapmaster Suit Imagine	\$ 69.95
Art Department Sharp JX100	\$135.00	Maxi Plan 4	\$151.95
Art Department Tools	\$ NEW	Mini Office	\$124.95
Art Expression	\$249.00	Morph Plus	(OVC) \$275.00
Bars & Pipes Creativity Kit	\$ 69.95	Morphus for Imagine	\$102.95
Bars & Pipes MultiMedia Kit	\$ 59.95	Newtek Media Station	\$199.00
Bars & Pipes Pro Studio Kit	\$ 69.95	No Virus	\$ 29.95
Bars & Pipes Professional II	\$379.00	PC-Task	\$ 59.95
BoardMaster	\$ 97.50	Pageetter V3	\$ 89.95
Brilliance	?SOON?	PageStream HotLinks V1.1	\$139.95
Broadcast Fonts 3D	\$155.00	Pagestream Font Classic	\$199.00
Broadcast Fonts 3D Caligari 2	\$155.00	Pagestream Font Newsletter	\$114.95
Broadcast Fonts 3D Lightwave	\$155.00	Pagestream Font Pack 1	\$ 79.95
Broadcast Titler 2	\$349.00	Pagestream V2.2HL & 47 Fonts	\$289.00
Broadcast Titler 2 Hi-Res	\$429.00	Pascal High Speed	\$185.00
Broadcast Titler Font Pack 2	\$159.95	PatchMeister (Bars & Pipes)	\$ 94.95
Buddy System AmigaDos V2.04	\$ 64.95	Pelican Press	\$ 92.50
Buddy System Deluxe Paint IV	\$ 76.95	Pixel 3D	\$199.00
Buddy System Imagine	\$ 64.95	Playmation	\$399.00
Buddy System Pagestream	\$ 59.95	Power Copy V3	\$ 91.95
C-Net V2.6	\$119.00	Power Packer Professional V4	\$ 37.50
CDTV Case O/T Cautious Condor	\$ 54.95	Printmaster Plus	\$ 66.95
CDTV Classic Cookbook	\$ 29.95	ProWrite 3.3	\$ 94.95
CDTV Fantastic Voyage	\$ 52.50	Pro Fonts Volume 1 (Suit Pro-Write)	\$ 35.95
CDTV NASA the 25th Year	\$ 29.95	Pro Fonts Volume 2 (Suit Pro-Write)	\$ 35.95
CDTV Sherlock Holmes	\$ 74.95	Pro Page V4 & Pro Draw Bundle	\$349.00
CDTV Snoopy	\$ 29.95	Professional Calc V2 AGA	\$185.00
CDTV The Connoisseur Art	\$ 52.50	Professional Page 3.0	\$ 99.00
Calagari 24	(OVC) \$475.00	Professional Page V4	\$179.00
Calculus	\$ 59.95	Proper Grammar II	\$ 84.95
Can Do V2.0	\$187.00	Quarterback Tools Deluxe	\$119.95
Can Do Pro Pak 1	\$ 35.00	Quarterback V5.02	\$ 66.95
Cinemorph	\$149.00	QuickWrite	\$ 49.95
Commodore Release V2.1 Kit	\$ 99.95	Real 3D V2	(OVC) \$799.00
Contact V2.0	\$ 74.00	SAS C V6 Dev System	\$419.00
Cross Dos V5.0 / Cross PC	\$ 59.95	Scala 500	\$129.00
Cycleman (Suit Imagine)	\$ 64.95	Scala MM210	\$399.00
Cyclemuscles (Suit Imagine)	\$ CALL	Scapemaker V2.0	\$ 39.95
Cygnus Ed Professional V2	\$ 91.95	Scapemaker V3.0	\$ 74.95
Deluxe Paint 4.1	\$164.95	Scenery Animator V4	(OVC) \$ 89.95
Deluxe Paint 4.5 AGA	\$221.95	SoftClipart Animals	\$ 74.95
Design Works	\$ 75.00	SoftClipart Classic	\$ 69.95
Directory Opus V4	\$104.95	SoftClipart Collectors	\$ 77.50
Disney Animation Studio	\$ 79.95	SoftClipart People	\$ 69.95
Distant Suns V4.2	\$ 89.95	SoftFaces Vol 1, 2, 3, 4 (ca)	\$ 94.95
Doctor Ami	\$ 57.95	Super Desk Jet Drivers V2	\$ 57.50
Dos to Dos	\$ 54.95	Super Jam V1.1	\$145.00
Easy AMOS	\$ 84.95	Superbase Personal II	\$ 89.95
Electric Thesaurus	\$ 56.95	Superbase Pro 4 V1.3 (NEW VERSION)	\$ CALL
Essence for Imagine	\$ 74.95	TV Paint	\$ CALL
Final Copy II (Australian Version)	\$169.00	True Print 24	\$ 89.95
Fred Fish CDTV	\$ 79.95	TypeSmith	\$199.00
Giga Mem V2	\$145.00	Video Director	\$199.00
Helm	\$185.00	Virtual Reality Studio V2	\$ 99.95
Hisoft Dev Pack 3	\$122.95	Visionaire	\$129.95
Home Office Kit Deluxe:		Vista Pro 3	(OVC) \$ 94.95
-Includes: Maxi-Plan, K/Words3, Infofile	\$185.00	Wordworth V2	\$169.00
Hyperbook	\$ 99.95	X-Cad 3000	\$199.00
Hypercache Pro	\$ 54.95	Your Family Tree	\$ 79.95

* Please note: Prices with \$CALL were unknown at the time of publication, Please call for current prices!

(OVC) Denotes **OpalVision** Compatibility

HUGE RANGE OF

GAMES

AVAILABLE

HARD DRIVE MECHANISMS

Quantum SCSI	40Mb ELS	\$ 399.00
Quantum SCSI	85Mb ELS	\$ 409.00
Quantum SCSI	105Mb LPS	\$ 475.00
Maxtor SCSI-II	120Mb	\$ 449.00
Quantum SCSI	127Mb ELS	\$ 499.00
Quantum SCSI	170Mb ELS	\$ 539.00
Quantum SCSI-II	240Mb LPS	\$ 679.00
A1200/A600 40 Mb HD		\$ 239.00
A1200/A600 88 Mb HD		\$ 499.00
A1200/A600 124Mb HD		\$ 585.00

BIGGER & SCSI II DRIVES AVAILABLE

OpalVision

Seeing is Believing
24Bit Graphics, 16.8 Million Colours

- ☒ OpalVision MAIN BOARD..... \$ CALL
 - ☒ OpalVision VIDEO PROCESSOR..... \$ CALL
 - ☒ OpalVision VIDEO SUITE..... \$ CALL
 - ☐ OpalVision SCAN-RATE CONVERTER \$ LATE '93
- *Graphics Tablets Available \$CALL (Package deals available)

MVB's Pledge to our OpalVision Customers:

- * THE BEST SERVICE
 - * THE BEST SUPPORT
 - * THE BEST PRODUCT KNOWLEDGE
- "We Guarantee It!"

☎ "Call to arrange a DEMO TODAY!"

Here's just some of the HUGE range of software already compatible with OpalVision:
Art Department, Aladdin 4D, Calagri 24, Imagine, Image FX, ImageMaster, MorphPlus, Real 3D V2.....

MEMORY CHIPS

* 2MB RAM SUIT GVP A500/A2000 HARD DRIVES	\$ 150-
* 4MB 32-BIT SIMM SUIT GVP 030 G-FORCE CARDS	\$ 349-
* 1/2MB RAM SUIT COMMODORE A590/A2091	\$ 37-
* 2 MB RAM SUIT COMMODORE A500/A2091	\$ 135-
* 1Mb 32Bit Simm, Suit MBX1200, DKB1202	\$ 95-
* 2Mb 32Bit Simm, Suit MBX1200, DKB1202	\$ 185-
* 4Mb 32Bit Simm, Suit MBX1200, DKB1202, A4000	\$ 285-
* 8Mb 32Bit Simm, Suit MBX1200, DKB1202	\$ 520-

RAM EXPANSION

* A500 512K RAM EXPANSION	\$ 69-
* A500 AX-RAM 4MB EXPANSION (0K)	\$ 99-
* A600 Pyramid 1Mb RAM OR CBM 1MB RAM EXPANSION (A601) ..	\$ 119-
* A600 16BIT PCM/CIA CREDIT CARD RAM 2MB	\$ 299-
* A600 16BIT PCM/CIA CREDIT CARD RAM 4MB	\$ 469-
* A2000 GVP SERIES II HARD CARD UP TO 8MB RAM	\$ 295-
* AX-2000 2Mb Chip RAM CARD	\$ 319-



NEW!

UMAX

COLOUR

FLAT BED SCANNER

600DPI 24Bits per pixel colour flatbed scanner
(Giving 16.8 Million Colours). Legal Size.
Includes SCSI Cable, Ideal for OpalVision Etc.....

☎ "Call to arrange a DEMO TODAY!"

Call For more information!

ACCELERATORS & RAM EXPANSION

A500:

* GVP A530+ 030 40Mhz 4Mb RAM	From \$1299-
* VXL 030 25Mhz No Co-Pro 0Mb	\$ 299-
* VXL 030 25Mhz with 68881 Co-Pro	From \$ 439-
* VXL 32Bit RAM 2Mb (Suit Above VXL 030)	\$ 475-
* VXL 32Bit RAM 8Mb (Suit Above VXL 030)	\$ 699-

A1200:

* CSA Twelve Gauge 030 50Mhz, MMU, 0Mb RAM	\$1299
* DKB A1202 16Mhz with 68881 & Clock 0Mb	\$ 349-
* GVP A1200 SCSI Cont- with No Co-Pro & 0Mb	\$ 519-
* GVP A1200 SCSI Cont- with 33Mhz 68882 & 4Mb	\$ 939-
* GVP A1230 030 with No Co-Pro & 0Mb	\$ 875-
* GVP A1230 030 & 68882 40Mhz WITH 4MB RAM	\$1175
* Microbotics MBX1200 with 68881 0Mb	\$ 339-
* Microbotics MBX1200z with clock & 68881 0Mb	\$ 339-

A2000:

* GVP G-Force 030 25Mhz with 68882 & 1Mb RAM	\$1025
* GVP G-Force 030 40Mhz with 68882 & 4Mb RAM	\$1499
* GVP G-Force 040 33Mhz with 4Mb 60ns RAM	\$1999

A3000:

* GVP A3000 G-Force 040 28Mhz With 2Mb RAM	\$CALL
--	--------

Anything not listed, Please Call us.....

Emplant now available, \$799-

THIS MONTHS SPECIALS

Commodore 386sx 25Mhz
Bridgeboard **\$699-**

Syquest 88Mb External Drive
INCLUDING: CASE & PSU **\$845-**

Clarity 16-Bit Sound Samplers
\$299-

GVP Cinemorph **\$149-**

GVP DSS Sampler **\$139-**

Commodore A570CD-ROM
Suit A500 **\$450-**

How To Order ??

- * Mail Order/ Phone Order
- * Visit our Showroom!
- * We Accept:



Visa, B/Card, M/Card, Bank Cheque,
Personal Cheque, Money Orders.

Phone For Prices, Availability
& Postage!



THE WORLD OF
AMIGA
IN ONE STORE!

Melway Ref: Page 51 A8



Computer Supplies

Dedicated to the Amiga & it's Customers!

Pty. Ltd.

"The **AMIGA** Specialists!"

AUTHORISED
Commodore
DEALER

✉ 506 Dorset Road,
Croydon, Victoria, 3136.

☎ **Ph: (03) 725 6255**

☎ **Fax: (03) 725 6766**

E & OE

☆ WE DON'T JUST SELL AMIGA'S WE USE THEM.
THIS ADVERTISEMENT WAS PRODUCED ENTIRELY ON AN AMIGA COMPUTER!

* Prices Subject to change without Notice

TUPsoft

Phone: (02) 482-7040 Fax: (02) 476-5736

P.O. Box 47 Hornsby NSW 2077

DEALER ENQUIRIES WELCOME

All prices listed are Recommended Retail Prices only.

Australian Distributors for

Final Copy II - Release 2. \$199.00

See double page ad in this issue for details.
Look for the "Aust. & NZ supported" sticker before you buy - your guarantee of local support & upgrades.

Soft Faces Vol. 1-4 \$99.00

25 typefaces for use with Final Copy & Final Copy II.

Proper Grammar II \$79.00

Check your documents for errors in grammar, style spelling and punctuation.

PageStream 2.2 \$299.00

The Professional Amiga* Desktop publisher - from dot matrix to Postscript.

Hot Links / Hot Links Editions \$79 / 165

Share data in real time between Hot Links compatible programs. Hotlinks Editions includes Pageliner and BME (now with auto-trace.)

Art Expression \$269.00

The Professional Illustrator program - powerful yet easy to use. Uses Soft-Logik and Type 1 Postscript fonts.

TypeSmith \$225.00

The Professional Outline Font Editor. Edit Compugraphic, PostScript and Soft-Logik fonts. Convert fonts between formats. Imports and exports DR2D structured drawings.

Ami-Back \$79.00

Back up to floppy, hard disk or tape. Image backups of any partition. Compression and unattended backup etc...

Ami-Back Tools \$79.00

Optimise disks, recover deleted files, repairs corrupt disk structure. Fast and reliable. Online help.

Ami-Back + Tools \$139.00

All-in-one data backup & hard disk repair & maintenance.

LinkUP! \$59.95

Transfer data between your Sharp Organizer* and your Amiga*. Formatted printing of data. Superbase support.

Kill Da Virus \$24.95

The Ultimate Virus Killer - kills 216 viruses.

Keep Track \$79.95

Customer contact-oriented database with integrated diary, calendar and to-do list.

PowerPacker Professional 4.0 \$39.95

Compress files to increase your storage capacity.

NOW Available...

POWER COMPUTING Products

PC1204 - 4Mb Ram Expansion for A1200 **\$499.00**

as above with 20 Mhz FPU **\$599.00**

Power Scanners - 100-400 dpi B/W **\$259.00**

200 dpi Colour **\$595.00**

Home Music Kit - 8 bit Stereo Audio Digitiser **\$120.00**

Midi Interface **\$49.00**

Plus more available soon

*All Trade marks Acknowledged



Getting back to the mainstream, UK house Meridian Software Distribution were selling some hard-to-find titles at excellent prices, including the new *Gunship 2000* game, stocks of which sold out in minutes on Friday morning!

User groups and bulletin boards also had a strong presence at WOC. East Coast Amiga, Eastern Suburbs User Group, Hornsby User Group and the Australian Amiga Users were all spreading knowledge and collecting new members, and the Amiga Connection BBS, now NSW's biggest Amiga specific board and working on being Australia's biggest, had its own stand with Mario Nicotra pressing the flesh and flogging the hardware.

The Australian Amiga Users stand was also displaying QuickNet, a complete ethernet networking system with memory expansion on the card too. QuickNet, in essence, lets any machine on the network have access to all the devices on all the other machines, transparently and really quickly. GP Software were showing their Oxxi-Novell networking system, along with their established sampling, sound enhancing and memory expansion hardware, not to mention the range of high density Amiga floppy drives which are finally locally available.

The Amiga Graphic Artists Special Interest Group (thankfully shortened to AGASIG), which deals with most graphic programs and also does miscellaneous service and upgrade work, was showing off the efforts of its members, right opposite the indomitable Ergo Works, regulars at every computer show, with their brilliant back-support truss that feels much less odd than it looks.

BASIC programmers were checking out the latest release of Blitz Basic on the Acid Software stand. Blitz 2, which combines much of the speed and power of assembler with the ease of use of BASIC, has drawn rave reviews around the world for its capabilities and system-friendly operation.

The show enjoyed a reasonably strong crowd despite the train hassles, and most exhibitors did a roaring trade; as a direct result of WOC Brashes will now be carrying high end Amigas and plan to return to next year's WOC. Overall the show was a success, and the continuing devotion of Amiga users to the platform augers well for the future.



OPUS Many Needs, One Solution.

Whether you're new to computers, a computer whiz, or somewhere in between, you'll find Directory OPUS an invaluable tool for making your Amiga more efficient and productive.



"Directory OPUS lets me feel like I'm in control, even if I don't always know what I'm doing. Instead of being frustrated, now I can do fun things with my Amiga!"

- Sonia King, Amiga Hobbyist



"With Workbench and CLI, you waste too much time using correct syntax and looking for the right program to view the right file. With OPUS, everything is at my fingertips."

- Harold Williams, Power User



"With OPUS I can get on with my real business. I don't waste my time figuring out commands or looking all over my hard disk for files."

-Greg Ruuska, Corporate User

Face it. The more you do with your Amiga, the tougher it is to organize hundreds of files, directories and programs. How do you copy a file? How do you view and manage multiple directories? Which viewer works best with which files?

How in the world do you control all these details, have some fun, and get some real work done?

Directory Opus is the answer!

Disk Management can turn into a full time job. OPUS keeps your life simple by giving you point and click control over all your housekeeping functions - like copying, moving, deleting, and renaming files. It also gives you enhanced requesters for doing things such as disk formatting, copying, and installing. The intuitive interface gives you the necessary information and tools to easily organize your files and directories.

Making Disk Management easy is just the beginning. Directory OPUS knows what your files are - even if you don't. Want to see any image file, regardless of format? Play sound files or even a music file? Run an animation? Just point & click with OPUS. Want to see what's in a Workbench drawer? Just drag and drop it to see a full list of its contents. And there's more. You can even use OPUS as a "home base" for common tasks like printing or searching for files, and for uncommon tasks like file encryption.

Why not have OPUS your way? Simple point and click configuration lets you modify every aspect of OPUS to suit the way you want to work. From interface colors and fonts, to the appearance and operation of every button, to controlling the way files are copied and deleted, the configuration program helps you through every step with on-line help.

Directory OPUS makes it easy to start your applications. Using the point and click configuration utility you can customize your Buttons and Menus and even teach Directory OPUS to recognize new file types. Got a word processor? Teach OPUS to run it and edit a selected file - it's a breeze!

Directory OPUS: The Number 1 best selling Amiga software utility. Pick up a copy today, or call Desktop Utilities at (06) 239 6658 for the location of the INOVAtronics dealer nearest you!

Directory OPUS: The Essential Directory Utility.



Distributed and supported in Australia by:

Desktop Utilities

PO Box 3053, Manuka ACT 2603

Tel (06) 239 6658 Fax (06) 239 6619

INOVATRONICS
i n t e r a c t i v e m e d i a

Inovatronics, Inc / 8499 Greenville Avenue / Suite 209B / Dallas, TX. 75231 / USA / Tel: (214) 340-4991 / FAX: (214) 340-8514
Inovatronics, Ltd. / Unit 11, Enterprise Center / Cranborne Road / Potters Bar / Hertfordshire / EN6 3DQ / ENGLAND / Tel: +44-707-662861 / FAX +44-707-660992
Inovatronics GmbH / Im Heidkamp 11 / W-5000 Coloane 91 / GERMANY / Telephone +49-221-875126 / FAX +49-221-8704747

Notepad

New Commodore Products

Commodore has officially released the A4091 SCSI-2 controller for the Amiga 4000, which allows 4000 users to run much faster drives than the included IDE unit. The 1940 and 1942 dual sync monitors have also been released to complement the new AGA machines, although they'll work fine on any Amiga. They offer flicker free high resolution modes and built-in stereo speakers and their prices compare favourably with the old 1960 multisync monitor.

Commodore Cutbacks

The recession is finally catching up with Commodore, despite its amazingly strong performance in recent years compared with the other major computer manufacturers. Various stories have been surfacing about layoffs in Commodore departments, along with financial losses and a consequent plunging share price.

Of course, this isn't anything new; IBM is still trying to figure out what bit of it does what, Apple is rumoured to have sacked about 4000 people and clone dealers have been running at near-zero margins for years.

Most of Commodore's cuts have been to its IBM clone division, but the Amiga side hasn't escaped completely unscathed. Development of the new AAA chipset (the one after AGA) continues, and we can expect to see the new AGA based console machine aggressively marketed around the world.

CedPro Improved

ASDG's *CynusEd Professional* is the editor of choice of many programmers - and many other people who have to shove lots of text around. It's only problem was that it hadn't been upgraded for three years now, and so it had a few disagreements with Workbench 2 and 3. Well, ASDG has now released *CEDPro 3*,

which fixes these glitches, and also adds localisation, macro editor, system clipboard support and search and replace history. It's an evolution, not a revolution, but this just shows how good *CEDPro* was to begin with.

Babylon 5

Amiga graphics freaks have been raving over the "thinking man's Star Trek", *Babylon 5*, which features extensive Amiga generated professional graphic effects, but until recently there was just a pilot episode with no concrete plans for a series. All This Has Changed with the official decision by the US Prime Time Entertainment Network to run a 22 episode series. Not a peep has been heard about Australian release dates, though.

Microprose Absorbed by Spectrum Holobyte

Gamers will be interested to know that Spectrum HoloByte, makers of the "Falcon" series games among others, have been pumping millions into MicroProse, creators of many military simulators including the brilliant new *Gunship 2000*. A merger will follow, with Spectrum owning 60% of MicroProse, and the combination will corner around 17% of the home computer game market.

68060 - Official Specs

Motorola has released further specifications of the to-be-released 68060 processor, which, in brief, will offer three times the power of the current 68040, which itself is about five times as fast as the 68030, which beats the 68000 by a factor of about ten. So machines running on the 060 will be around 150 times as fast as the 68000 based plodder.

Interesting features include the ability to power down parts of the chip which aren't actually doing anything - which

should mean the chip doesn't need the huge heatsink and fan assemblies of most recent CPUs. The 060 will also run from a 3.3 volt supply, as opposed to the common 5V. This makes it well suited to portable computers. The 060 should be available in small quantities in the third quarter of 1993, but real supplies probably won't happen until early 1994.

While Motorola's been busy on several different fronts developing chips for other architectures, it's said the 68000 series will be alive and well until at least the year 2000.

SCALA Again ...

The ubiquitous SCALA Multimedia has found yet another home, this time at Perth International Airport where it's being used to display passport and immigration information, among other things, to arriving passengers. Australian Customs plans to implement the system at all of Australia's international airports.

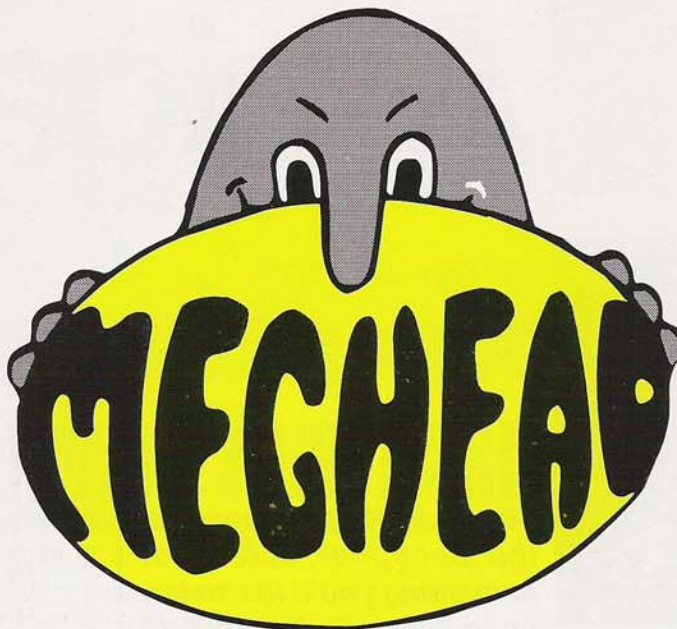
Sony buys Psygnosis

Sony Electrical Publishing Company, the digital multimedia division of the international megacorporation, has acquired Psygnosis, makers of many of the Amiga's most popular games. Psygnosis will now be developing software for Sony's interactive CD system in addition to their other activities, and this raises questions as to whether Psygnosis will be allowed to develop software for other platforms when Sony's entertainment system is up and running.

Amiga Night Classes

If you're looking for help with basic or more advanced Amiga operations, Day's Amiga Night Classes could be an economical way to get up and running. There are three weekly three hour sessions in each course, and the classes are based in Granville, in the Sydney suburbs. For more information call (02) 622 4746. □

NOTE: We can assure readers that the company referred to as XXX in Letters on page 14 of the July issue was **not** MVB Computer Supplies.



Sydney' Ultimate
AMIGA
OUTLET



Over 17,000³ feet of computer software, hardware and add ons!

Open 7 Days

1 Railway St, Chatswood. Tel 415 3355 Fax 415 3383
(Next to Chatswood station. Mail orders welcome.)



Vidi Amiga 12

by Walter Starck



Seen a fleeting glimpse on the phosphor screen of something you'd like to tart up in Deluxe Paint? VIDI-12 will let you capture video to disk without the usual price tag.



One of the best things about personal computers is that as the technology gets better and better it also gets cheaper. The Vidi-Amiga 12 is a case in point.

Until now there were three categories of Amiga video digitisers. At the low end was the cheap and nasty with results to match. At the high end there were high quality real time frame grabbers (usually incorporated into 24 bit display systems) costing about as much as the computer itself. Then, for the rest of us, there was Digi-View, cumbersome and painfully slow but yielding pretty good results.

Recently, after damaging yet another favourite video tape image by leaving the VCR too long in pause mode while waiting for Digi-View to complete its interminable scans, I decided it was time for a new digitiser. I had seen ads and reviews for the Vidi-Amiga 12 in Brit-

ish Amiga magazines. It promised quality results, one second RGB grabs, a built in colour splitter and the price was right. Much less in fact than a Digi-View plus a colour splitter.

Local or over the seas?

Now I faced the perennial dilemma. Do I buy from a dealer here or order from an overseas source at considerable discount? For me, living in the Daintree rainforest, it's mail order in any event and inevitably lengthy delays if anything has to be returned. So, I decided to risk it and go for the savings - \$150 rather than \$275. All I had to do was pick up the phone and place my order.

My first call resulted in a recorded message advising of a disconnected number. Now I understood how they could offer such great prices and still stay in business. They couldn't!

I moved upmarket a few dollars and called another vendor. This one did not accept overseas orders. Try another, this time they wouldn't accept payment by credit card but wanted a bank cheque. This was really educational, already I was beginning to understand why the UK economy doesn't work.

Fortunately I had not yet run into the "Mr Earlobe is on another line will you hold" routine so the calls were brief, but still Telecom was eating into my putative savings. The situation was getting desperate.

I tried again. This time the ad promised "No. 1 in customer service" and they were, friendly and knowledgeable plus a 15% discount for the VAT which is not applicable for orders from outside the EEC. Also, they were blessedly quick so there was still hope of snatching victory from the jaws of Telecom.

Half digested crayons

Two weeks later the package arrived. I connected up my Sony V5000 Hi 8 camcorder for input and booted the software. I wound the tape to a nice image of a rainbow lorikeet, hit the pause button and grabbed my first image. In a second the grab was completed and I waited while the RGB scans were mixed to display the finished image. The result was worse than awful.

It looked like some kid had eaten a box of crayons and thrown up on the screen. There were random flecks of colour scattered around amidst a sickly puce background. With some imagination, here and there you could discern vestiges of the source image.

I persevered. Experience has taught me that with computers when new stuff doesn't work it's more likely the result of improper usage than an actual fault. Often too the manuals neglect to mention basic essentials. They are written by people so familiar with the subject that basic things may be so obvious as to have become invisible. Anyway this stuff isn't meant to be easy. If it was everybody would be doing it and it would no longer be interesting.

Switching snags

Eventually I discovered that signal attenuation and noise induced by my parallel switchbox and cable to the parallel port were the problem. When you plug the Vidi-Amiga directly into the parallel port the problem disappears and

the unit performs as claimed, yielding excellent results. One catch though, you can't plug the Vidi-Amiga directly into the parallel port on the 2000 due to interference with the video port.

This is not a problem on my 4000. With other model Amigas I don't know. You need 40mm clearance to the left of the port and 10mm to the right (as viewed from the rear) to accommodate the Vidi-Amiga. Where interference is a problem the manual recommends a short ribbon cable. Judging from my experience the shorter the better, 100mm would be long enough.

Up and running

Installation is simple. Click on the installation icon and you are asked if you want Vidi-Amiga installed on your system disk. If, like me, you have separate hard disk partitions for your system and applications software and answer no, you are returned to the opening win-

"It looked like some kid had eaten a box of crayons and thrown up on the screen"

dow with no explanation either on screen or in the manual.

If you answer yes, there's a brief write to your system disk or partition, after which you may copy the Vidi-Amiga 12 software wherever you want provided you name it VidiAmiga12 with no spaces.

The software is straightforward and easy to use. There is a main window providing access to six function windows. Two permit selection of grab and display mode preferences. Another controls the actual grabbing process itself,

VIDI-Amiga 12 Specifications

- Input: Composite via RCA socket Y-UV via S-Video socket
- Power: via Amiga external disk drive port (cable included)
- Capture res: 320x200 or 256 (NTSC or PAL) plus interlace
- Palette res: 12 bits (4 each RGB), 4096 colours, 16 grey shades
- Display: 2 colour to 256 colour plus HAM & HAM8
- Interlace, High Res and Overscan
- Grab time: 1/50 sec for non-interlaced monochrome. 1 sec for interlaced colour

Overscan capture is available. The high-res display is apparently achieved via software interpolation. Why, might you ask, a HAM 8 display mode if the palette is limited to 4096 colours? The answer is that HAM8 virtually eliminates the fringing effect of standard HAM. Note: My software is V 2.03. I have heard that earlier software lacks the AGA support.

permitting a choice of colour or monochrome and manual, remotely actuated (via joystick) or automated variably timed grabs. The latter is for time lapse and animation purposes.

A MIX control window allows reformatting of images between various display modes. An EDIT window offers a dozen basic image processing functions plus cutting and pasting portions of images. Finally, a CAROUSEL window enables you to store a series of images in memory where they may be arranged, deleted, viewed or played back as an animation. The images are represented as numbered thumbnail images in the carousel window.

Images may be saved as ILBM, 12 bit, or 24 bit files.

There is no provision for colour balancing and the image processing capability is pretty basic with no control over thresholds, degree of intensity or

other parameters. Your control is limited to Do It, Don't Do It, and Undo It. If you have proper image processing software you won't bother with this part.

The results speak

So, at the bottom line, how good is the Vidi-Amiga 12? In my opinion it's pretty damn good. Using a Hi 8 source the resolution is not quite as good as the original but appears to be better than a standard Video 8 or VHS image. With a good image, colour and contrast are excellent, but poorly lit or overly contrasty images are hopeless. The shadowed areas go to black and the highlights burn out. Even cranking up the manual luma gain adjustment all the way won't bring out shadow detail.

Getting the black, white and colour adjustments right in the grab control window is essential for a good grab. The effect of the B&W adjustments can

Your Amiga on a Big Screen

By the way, along with the Vidi-Amiga 12 I ordered an Amiga video to SCART cable. The poor Brits apparently can't afford real monitors so they use this which costs about \$20. It permits you to use a SCART equipped TV as an RGB monitor. The results

on my JVC TV is every bit as good as a 1084 monitor but on a 72 cm (28 in) screen. Awesome! Of course the TV cost two grand which would also buy a pretty impressive monitor, but I already had the TV.

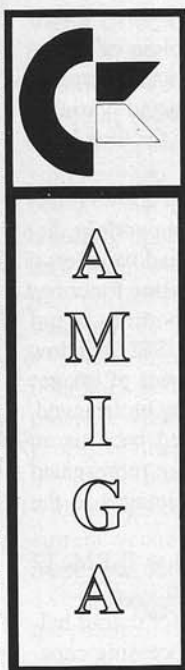
be seen on the monochrome image appearing on the same screen. A good monochrome image = a good scan. The colour adjustment is harder but generally requires less tweaking - the default setting is usually satisfactory. The only way to tell is by trial and error. Do a scan and see. As a scan doesn't take forever this is not too painful.

4096 colours adequately reproduces most images, but with colourful scenes you may run out of palette, resulting in

noticeable colour contouring rather than even shading. This becomes most apparent in skin tones and the sky.

At its best some of the images I have digitised look better than the original video. Overall the Vidi-Amiga 12 gives better results and is far easier to use than my previous digitiser. Bring on the Vidi-Amiga 24. Checking out the accompanying images will let you judge for yourself. ☐

**If you feel lost, helpless and confused,
Just follow this signpost!**

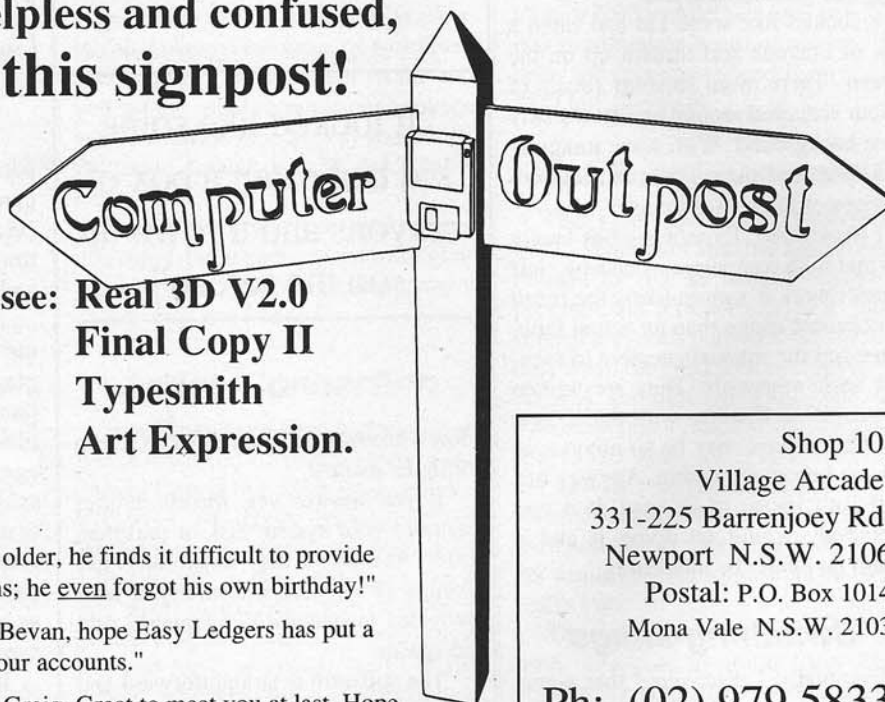


**Come in and see: Real 3D V2.0
Final Copy II
Typesmith
Art Expression.**

"As Dougal gets older, he finds it difficult to provide the right solutions; he even forgot his own birthday!"

"G'day to Brian Bevan, hope Easy Ledgers has put a solid frame on your accounts."

"G'day to Bruce Greig, Great to meet you at last. Hope you enjoyed your stay down here and good luck with your video work!"



Shop 10,
Village Arcade,
331-225 Barrenjoey Rd.
Newport N.S.W. 2106
Postal: P.O. Box 1014
Mona Vale N.S.W. 2103

**Ph: (02) 979 5833
Fax: (02) 997 5641**

LEISURE

Title	Members	Price	Price
A-Train	84.95	87.95	
A-TRAIN CONST.	49.95	53.95	
Abandoned Places II	74.95	77.95	
AIR WARRIOR	84.95	87.95	
Alien 3	64.95	67.95	
Apocalypse	64.95	67.95	
Armour Geddon 2	64.95	67.95	
Ashes of Empire	84.95	87.95	
ATAC	74.95	77.95	
B17 FLYING Fortress	74.95	77.95	
Bat II	74.95	77.95	
Barbarian II	54.95	57.95	
Battle Isle	64.95	67.95	
BC KID	64.95	67.95	
BEAVERS	64.95	67.95	
Birds of Prey	59.95	63.95	
Black Crypt	49.95	53.95	
BODY BLOWS	64.95	67.95	
Bride of Dracula	74.95	77.95	
Caesar	74.95	77.95	
Campaign	84.95	87.95	
Cannon Fodder	49.95	53.95	
Celtic Legends	54.95	57.95	
CHAOS ENGINE	64.95	67.95	
Chuck Rock II	64.95	67.95	
Civilisation	74.95	77.95	
CONTRAPIONS	64.95	67.95	
Curse of Enchanter	64.95	67.95	
Dark Seed	74.95	77.95	
Dark Queen of Kryn	64.95	67.95	
DESERT STRIKE	64.95	67.95	
Dragons Lair III	64.95	67.95	
Dune	64.95	67.95	
Dune II Battle Arakkis	64.95	67.95	
Elf	54.95	57.95	
ET'S Football	64.95	67.95	
Eye of Beholder 2	64.95	67.95	
F1 Grand Prix	74.95	77.95	
Fantasy Worlds	84.95	87.95	
Flight of Intruder	74.95	77.95	
Graham Gooch Cricket	74.95	77.95	
Gunship 2000	84.95	87.95	
Heart of China special	36.95	39.95	
Heimdall	63.95	67.95	
HISTORYLINE	74.95	77.95	
Howzat (One Day)	64.95	67.95	
Humans	74.95	77.95	
John Madden football	49.95	53.95	
KGB	45.95	48.95	
Kingmaker	64.95	67.95	
Knightmare	63.95	66.95	
Knights of the Sky	69.95	73.95	
Kyrandia	63.95	67.95	
Leander	63.95	66.95	
Legacy	65.95	67.95	
Legend	72.95	75.95	
Legends of Valor	64.95	67.95	
LEMMINGS II Tribes	74.95	77.95	
Lethal Weapon 3	64.95	67.95	
Lotus 3	64.95	67.95	
Lure of Temptress	64.95	67.95	
Mega Fortress	72.95	76.95	
Might & Magic III	73.95	76.95	

Our objective and policy is to be as competitive as possible with the lowest prices on all our products. It is no longer possible for us to list all the products we sell. If you don't see it please call. All prices and availability are subject to change without notice.

LOGICARD MEMBERSHIP DETAILS: Just enclose \$10.00 annual fee with your initial order & receive:

- * Catalogue
- * Membership privilege card and pin number.
- * 6% off on all competitors advertised prices.
- * Discount vouchers and unbeatable special offers.
- * Save hundreds of dollars on recommended retail prices.
- * Joining a club with more than 2001 members.

Yes we do...
and better it!

In the event that you find a lower priced item in this magazine.

AMIGA

PRODUCTIVITY			
Title	Members	Price	Price
Action Replay 3		174.95	179.95
Aladdin 4D		433.95	437.95
Ami align. kit		64.95	67.95
Ami Back V2.0		66.95	68.95
Amos		122.95	127.95
Amos 3D		85.95	89.95
Amos Compiler		64.95	67.95
Amos Professional		164.95	167.95
Arexx		84.95	87.95
Art Depart. Pro		238.95	242.95
Art Expression		248.95	252.95
Audio Engineer+		329.95	339.95
Audio Eng'n+jn		179.95	187.95
Bars Pipes Pro V2		348.95	352.95
Brilliance			Call
Broadcast Title2		356.95	360.95
Broadcast Hi-Res		458.95	462.95
" Fonts 3D		151.95	154.95
" Caligari 2		151.95	154.95
" Lightwave		151.95	154.95
Calagari 24		470.95	474.95
Can Do V2.0		186.95	188.95
Cinamorph		269.95	274.95
Contact V2.0		73.95	76.95
Cross Dots 5		53.95	56.95
Cygnus Ed Pro		90.95	95.95
Deluxe Paint 4.1		163.95	168.95
Deluxe Paint AGA		220.95	225.95
Deluxe Print II		92.95	96.95
Deluxe Video III		92.95	96.95
Design Works		103.95	107.95
Dev Pack V3.0		144.95	147.95
Directory Opus V4		103.95	108.95
Digi-Works 3D		135.95	145.95
Distant Suns V4.1		96.95	99.95
DrT's DTP		439.95	445.95
DrT's Tiger cub		145.95	149.95
Easy AMOS		83.95	86.95
Essence 4 Imagine		73.95	76.95
Excellence V3.0		115.95	118.95
Final Copy V2.0		134.95	137.95
Flow V3.0		94.95	97.95
Giga MEM V2		132.95	136.95
Halcalc		62.95	66.95
HiSoft Basic Pro		189.95	199.95
HiSpeed Pascal		189.95	192.95
Home Accounts 2		128.95	133.95
Hyperbook		132.95	137.95
Image FX		464.95	469.95
Imagine V2.0		292.95	296.95
Kind Words 3.0		118.95	122.95
Maxiplan 4.0		150.95	154.95
Mini Office		124.95	127.95
Morph Plus		273.95	277.95
Morph 4 Imagine		109.95	113.95
Outline Fonts		259.95	269.95
Pagesetter 3		93.95	96.95
Pagestream 2.2		286.95	294.95
" Business forms		45.95	47.95
" Font Classic		189.95	194.95
" Font Newsletter		109.95	112.95
" Font Pack 1		74.95	77.95
" Hotlinks V1.1		138.95	142.94
Pelican Press		96.95	98.95
Pixel 3D Pro V3.0		229.95	234.95
Power Copy Pro 3		91.95	94.95
Pro Draw V3.0		189.95	193.95

GVP

A500 HD/520	835
A500 HD/120Q	1095
A2000 HD/520	695
A2000 HD/120Q	995
G-Force 030 25MHz	1095
G-Force 030 40MHz	1695

For all GVP products, Please call

LOGICO

M U L T I M E D I A

P.O. BOX 572 MARRICKVILLE NSW 2204

**24HR ORDER
HOTLINE
016 284 793**

* Cost of a local call.

ALL ENQUIRES
CALL 02-558-1884
MON-FRI 9am - 5pm
FAX 02-558-1884

Commodore 64 / 128

Title	Members Price	Price
Action Replay MK VI	115.0	119.0
Database: Video Lib.	45.95	49.95
Fast load Cartridge	47.95	49.95
GEOS 64 V2.0	64.95	67.95
GEOS 128 V2.0	74.95	77.95
GEOCALC 64	49.95	54.95
GEOCALC 128	57.95	59.95
GEOCHART	49.95	54.95
GEOS font pack plus	49.95	54.95
GEOS Int'l nat font pck	49.95	54.95
GEOFILE 64	49.95	54.95
GEOFILE 128	57.95	59.95
GEOprogrammer	49.95	54.95
GEOPUBLISH	57.95	59.95
M1 Mouse (GEOS)	47.95	49.95
M3 Mouse (GEOS)	84.95	87.95
Mavis Beacon Typing	47.95	49.95
Superbase	64.95	67.95
Word Writer 6	74.95	77.95

CMD PRODUCTS

Collette Utilities	52.00	55.00
GateWay 64/128	75.00	79.00
GeoCanvas	57.00	59.00
GeoMakeBoot	19.95	19.95
JiffyDos 64 V6.0	105.00	109.00
JiffyDos 128 V6.0	125.00	129.00
LQ Border Fonts	32.00	35.00
LQ Font Collection 3	32.00	35.00
Perfect Print LQ	73.00	77.00
RamDrum 1Mb	485.00	489.00
RamLink 1Mb	585.00	589.00
FD Series Floppy Drives		CALL
HD Series Hard Drives		CALL

**PLUS 100'S OF GAMES
CALL FOR TITLES.**

AMIGA SPECIALS

Amos	120.00
Can Do V2.0	190.00
Cinemorph	265.00
Final Copy V2.0 ..	139.00
Imagine	289.00
Morph Plus	275.00
Quarterback 5.0	65.00

Scala Multimedia .. 399.00
 Wordsworth V2 285.00
 Excellence V3.0 119.00
 with Organizer
 Addison Wesley Books
 Amiga Rom Kernal manual:
 Amiga Hardware manual:
 \$35.00 each. SAVE \$15.00

Mail Order Form

PO Box 572 Marrickville NSW 2204

Name:

Address:

Post Code:

Phone: () Date Sent:

Payment: ☐ Bankcard ☐ Visa ☐ Mastercard

☐ AMEX ☐ Money Order ☐ Cheque

Card No:

Exp. Date / Signature:

Susan's Message Board.

"Do not follow where the path may lead. Go instead where there is no path and leave a trail."

Qty.	Product/Program Name	Computer	Disk Type	Price

			Postage	\$	3.00
Membership-No:			Total	\$	.

Update: Final Copy II

Barry Caudle reviews an important update to Final Copy II - one of the leading Amiga WYSIWYG wordprocessors.

Final Copy II has been improved. The new release has a number of significant new features. These include A3 and A5 page sizes for easy setup of odd sized documents, landscape printing, Adobe Type 1 font support, automatic font downloading during Postscript printing and Compugraphic font support for dot matrix compatible printers and improved Workbench 2.x compatibility.

Improved printing

The new landscape or sideways printing option is defined in the Project/Page Setup menu. Landscape printing rotates the output 90 degrees so lines of text print down the page instead of across. This is ideal for reports, or small booklets.

To set up a page for landscape printing the custom button is used and the Width (which must be greater than 20.3cm) and Height values of the paper are swapped. The print area margins also need to be changed to reflect the new orientation of the paper.

Adobe Type 1 font support

Previous versions of *Final Copy* only supported its own proprietary NimbusQ font technology. The Release II font engine also supports Adobe Postscript Type 1 fonts, which are widely available, and come in many typefaces. Loading Type 1 fonts is quite simple - the *Final Copy* font requester allows the selection of any volume and/or drawer for fonts. So, you can keep your

Type 1 fonts anywhere you like.

There is a small delay while a Type 1 font is loaded into the font engine, but then there is no difference in speed between it and other types of fonts. Any point size up to the maximum supported by *Final Copy* may be used.

The quality of the printed output on a dot matrix printer is the same regardless of whether NimbusQ or Type-1 fonts are used or even mixed in a document. This is great news for dot matrix users, since *Final Copy*'s printed output is already about as good as you can get.

Automatic Postscript font downloading

Automatic font downloading is a new feature when Postscript printing. If you have NimbusQ or Type-1 fonts in your document which are not on your Postscript printer, these fonts will be automatically downloaded when the document

is printed.

This feature also applies when Postscript printing a document to a file. Be warned when printing to a Postscript file - I had one non-standard font and ended up with a 90k file for a document which was only two lines long.

One of the benefits of printing to a file is that you can easily take or modem it to an output bureau.

Compugraphic font support

The font engine in *Final Copy* now supports Compugraphic fonts, but with a number of prerequisites and a limitation or two. The prerequisites are you must be using Workbench 2.1 or greater and you must be using a hard disk. If you intend outputting your document to a Postscript device, you can't use Compugraphic fonts.

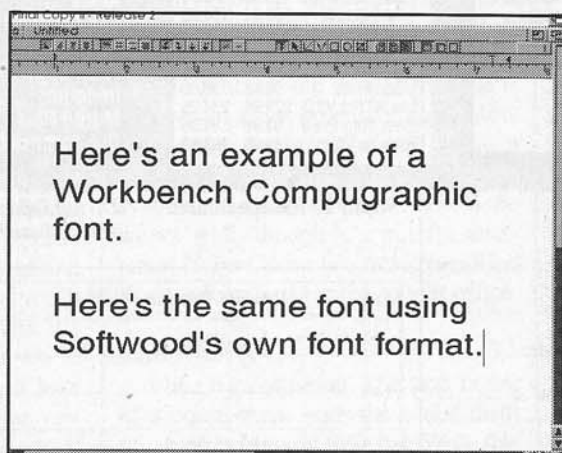
The Compugraphic fonts have to be in Workbench format. Speed is similar to a Type-1 font after the initial load of the font into the font engine. The quality of printing is the same on a dot matrix printer for this type of font as a Type-1 or NimbusQ font or any mixture of the three types.

In Softwood's literature on the new release they make some strong points against Commodore's decision to go with the Compugraphic standard and use these to justify the fact *Final Copy* does not offer Postscript support. Strangely enough, desktop publishing programs like *PageStream* and *Professional Page* have no problem outputting Compugraphic fonts to Postscript and indeed we've had no trouble sourcing them or converting Adobe Type 1's to Compugraphic format.

Conclusions

Final Copy II Release 1 was only released in October 1992 and already Release II is available. This is rapid development and indicates a strong future for this program. The new features work well and further strengthen an already good word processor.

Review copy from Amadeus Computers (02) 652 2712. Distributed by Tupsoft (02) 482 7040. □





DON QUIXOTE SOFTWARE

The **AMIGA** and **CDTV** Specialists

Scanners

"If you're in the market for a hand scanner then forget the rest and get Powerscan"

Amiga Format July 1992

Power Scanner v3.0



- 100-400 DPI scanning resolutions
- 64 greyscales
- Thru 'port for printer
- Award winning editing, image manipulation & scanning software

Power Scanner v3.0.....\$399
Power Scanner Colour.....\$599

Upgrade Offers

If you consider your scanner system to be inferior to the Power Scanner, we will happily upgrade your software and interface. (Power Scanner is compatible with most scanning heads)

V3.0 Upgrade (inc. interface)....\$113
V3.0 Software upgrade for PowerScanner users(send SAE)...\$40
The Amiga can only display 16 greyscales

105 Meg Syquest

Syquest 105 Meg from Power Computing

- Removable SYQUEST with 105 M cartridge
- SCSI device, fits A590, A2000Hds, A3000

SYQUEST 105.....\$1990



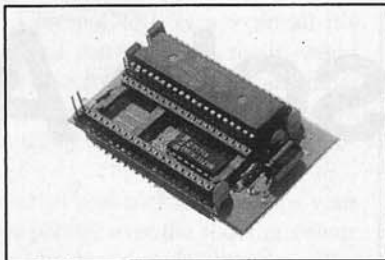
Plus our usual large range of AMIGA and CDTV Products

Prices subject to change without notice. Some large items may cost more post.



Auto ROM Share

- Kick off is the latest
- One of the most advanced kickstart ROM sharers available
- A clever design on a small re-label board
- No "CIA adapter" or other trailing wires
- Jumper to select which ROM boots first
- Simple internal fitting



ROM Share.....\$49.95

Video Backup System

- Use VCR as a backup storage device
- Blank video tape is all that is required
- 200 Amiga floppy disks will fit on a 4 hour tape
- Can be used for hard disk backup
- There is room for 175MB of data
- Backup and Amiga disk in 1 minute
- Allows you to watch VCR on 1084 Mon.
- Effective error correction

Video Backup System.....\$160

A1200 Memory

PC 1204 4MB Memory Expansion for the Commodore Amiga 1200
Power computing's innovative 4MB 32 bit memory expansion for the A1200 is now available. The PC 1204 includes these many features.

- Zero Wait State-Unlike some other expansions the PC1204 allows your amiga to run at its maximum speed.
- Ultra Fast FPU- An optional maths co-processor speeds up intensive calculations. A 50 MHZ chip will speed up operations by up to 50 times.
- Real-Time Battery backed up clock- Allows files to be date stamped.
- Low Power- High Density RAM's mean low power consumption.
- Easy to fit- Fitted in minutes without the need to remove the computers case.
- Optional FPU Disable Switch- Disable the FPU instantly for software that will not run with a maths co-processor installed.

PC1024 4MB with clock, no FPU.....\$489
PC1024 4MB with clock, 20 MHz FPU \$670

PRICES DO NOT INCLUDE POSTAGE.
POST- \$5.00
COURIER- \$9.00

THE DELUXE WORK CENTRE

FOR THE AMIGA A500 AND SOON A600 & CDTV

FULL METAL CONSTRUCTION

Comes with:

- Dust cover
- Mouse keeper
- Mouse mat
- Joystick and mouse leads

\$119.95 plus p/h



AS ADVERTISED IN UK MAGAZINES now produced in AUSTRALIA

CLR & DEJA VU LICENCEWARE

Almost 200 Titles Of Mainly Educational Programs For The Entire Family!

New Titles Include:

Basically Amiga (Amiga Dos Ref)
Lets Learn (5 To 7 Age Group)
Alphabet Teach (Preschool To 7)
Kings And Queens (Reference)
Words' N Ladders (Spelling Game)
Night Sky (1500 Stars)
Powertext
Typing Tutor
Video Titles
Alpha Graph
Menu Maker

Total Concepts:

Dinosaurs
Geology
Solar System
Fresh Water Fishing
Ecology

Educational Software from Lasselles Productions

Back to Basics
Fractions
Word Construction
Kim (new release)

CDTV

Large range available

MAIL ORDER (C) (076) 391578

OR WRITE TO
P.O. BOX 786, TOOWOOMBA, QLD. 4350
TOOWOOMBA STORE, 25a Russell St.
Ph (076) 39 1578 Fax 076 320195

For all your **AMIGA** needs DEALER ENQUIRIES WELCOME

World Exclusive

Amiga Games Console At Last!

by Andrew Farrell

When Amiga was designed, it was meant to be the ultimate games machine. Eight years later, Commodore are launching an Amiga that is just that ... and a whole lot more.

For three years we've lamented the success of Sega and Nintendo, for one good reason. They've been hurting the Amiga. Now Commodore are fighting back with the release of a hot new Amiga based games console. Commodore are convinced they can win back the low-end market for home computer entertainment. How?

Amiga CD 32

Sure, it plays Amiga games. But it does a lot more. The device appears to be based around a cut-down Amiga 1200, with the addition of a CD-ROM drive. Like CDTV, it plays CDs and CD+G discs. Like CDTV, you can happily run interactive multimedia titles. However, the extra kick this baby has also makes it very suitable for fast action games using CD storage and sound plus AGA graphics.

Amiga CD 32 could have easily been designed by Sega. Thankfully it wasn't,

although Commodore are said to be planning on licensing the technology to other manufacturers.

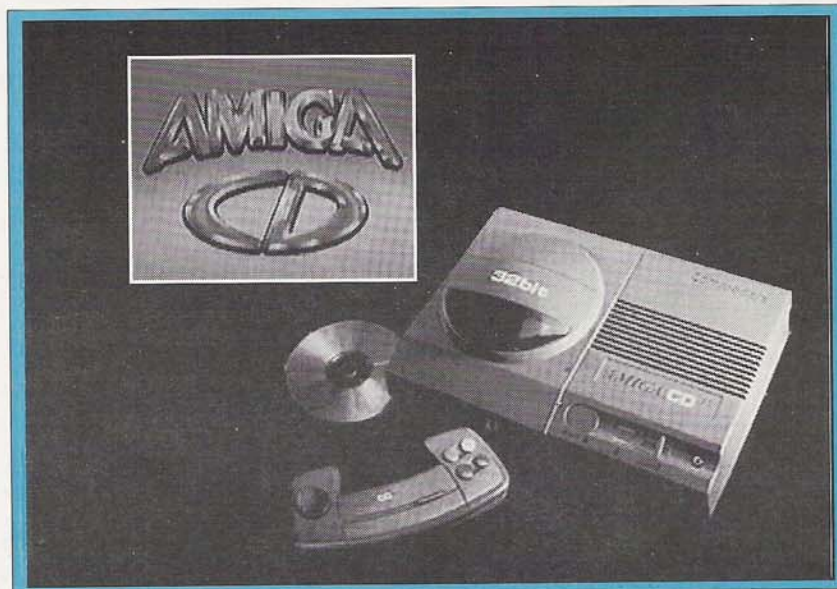
Discs are loaded by opening a simple hinged lid on top of the unit. There's no clumsy caddy or awkward cartridge slots. The hand controller is attached by a long cable to a standard joystick connector. There's only a handful of buttons and simple rocker style joy control button. It's adequate, but no doubt third party replacements will sell well.

The console connects directly to a

composite or S-VHS monitor, as well as into the usual aerial socket of your TV. The stereo sound connectors plug into your hi-fi. There is no RGB connector.

Disc Titles

Commodore promise a major entertainment title will be ready to ship at the machine's official launch later this month. Indeed, developers have known about CD 32 for some time. A few let it



slip in advertising and manuals on a number of occasions. So, it's not surprising that Commodore expect to have 17 other Amiga CD 32 titles available too when the console is released. How many of these will be true AGA quality remains to be seen.

My guess would be that only a handful really use the machine to its full potential initially. Perhaps we will also see improvement on older CDTV titles to take advantage of the new machine's extra speed and colour. Interestingly, the September launch date in Australia coincides with the arrival of the new hit movie *Jurassic Park*.

Expandability

In late '93, an MPEG Video-Module will be released. This will add the capability of playing more than 70 minutes of video from disc. According to Commodore the AMIGA CD32-Full-Motion-Videomodule offers 1:1 TV quality at 30 frames per second. Sure sounds

impressive. Time Warner plan to have a number of titles for the video module's release with many more to follow. Goodbye video disc, hello Video CD.

Amiga CD 32 will one day dock with an external unit to allow full computer functionality. When this will happen is difficult to tell. An additional 2Mb of RAM can be added - however this will also require the expansion box. So, as it stand today, the console is a 2Mb machine. Since the CD drive is one of the new double speed models, memory is not as so critical.

In the short term we may also see some kind of keyboard add on. The high speed Aux connector that makes this possible will also handle a virtual reality glove. Did I hear the word Nintendo?

Opinion

Simplicity and elegance. I'm pretty excited about Amiga CD 32. Although this is essentially the CDTV II that's

World Exclusive

been rumoured for so long, it's certainly not a CDTV style device. Amiga CD 32 is a games console through and through.

This is Commodore's immediate future. Given the wave of interest in multimedia based machines and the continued growth of the low-end entertainment market, they may well have a winner on their hands - if consumers don't mind paying the higher price of around \$500-\$600.

Commodore International has trimmed back and prepared for action. They've dropped the PC range and gone all out Amiga. This is it. Commodore are declaring war against the competition - competition that will no doubt promise a mighty battle. May the best machine win ... Today Sega, tomorrow IBM! ☐



- ☐ True 24Bit Colour display
- ☐ User Programmable Super High Resolutions (2048x2048)
- ☐ Graphics Co-Processor.

- ☐ High performance FAST SCSI-II DMA controller.
- ☐ 32 bit Zorro III interface (A3000/A4000).
- ☐ 64 Mb memory expansion option.
- ☐ External SCSI-II port
- ☐ Full support of Rigid Disk Block, SCSI Direct, diskchange with removable media (auto-mount and

- ☐ High Refresh Rates and Flicker Free.
- ☐ Hardware Cursor.
- ☐ 4Mb Video RAM and more..

- ☐ auto-unmount of different partitioned volumes (volumes), CD-ROM, CDTV, A-MAX II and MS-DOS formatted volumes (cartridge and disk drive exchange with PC's possible).
- ☐ DYNAMICACHE TM for additional performance.
- ☐ Made in Germany, 2 year warranty.

- ☐ Fully populated 4Mb 32-bit FAST RAM expansion.
- ☐ Fits perfectly in to the "Trap Door" slot.

- ☐ Math Co-Processor Socket Expandable to 8Mb with the Blizzard ADD4. **Now Available**
- ☐ 2 year warranty.

Phoenix

AMIGA SPECIALISTS

18 Hampton Rd Keswick 5093 TEL:(08) 293 8752 FAX:(08) 293 8814

How to get

Perfect Sounds

H. Wynen shows us how to achieve better results when sound digitising.

The quality of compact disc sound reproduction is close to perfect. So it's no wonder that developers of computers and computer related peripherals have tried to bring this quality standard to their machines.

Although true 16 bit technology, the secret behind the CD's performance, is still somewhat expensive, there are nevertheless already a number of sound boards available for the Amiga (and other computer systems) which offer 16 bit sound to sound enthusiasts with more money to spare.

If the rumours presently doing the rounds are to be believed, it'll be just a few short months before the first Commodore machines equipped with 16 bit sound will start appearing in shops.

In the meantime, let's scrutinise the capabilities of the present Paula chip which has served thousands of Australian Amiga owners for so many years.

Perfect Sound

Computer sound quality is determined by three major factors; frequency response, dynamic range and sampling rate. The first requires that the sound at the output terminals maintains the relative differences in volume levels between all audible frequencies as they are in the input signal, at least within certain tolerances.

The Amiga returns average results in

this category at present - its high frequency response is pretty weak, and this can be rectified with the addition of a Sound Enhancer type treble booster.

The Amiga also has about half the output voltage of normal line level audio sources, so can be a bit of a pain to mix in professional applications. For most users, though, just cranking up the volume suffices.

Noise or Music?

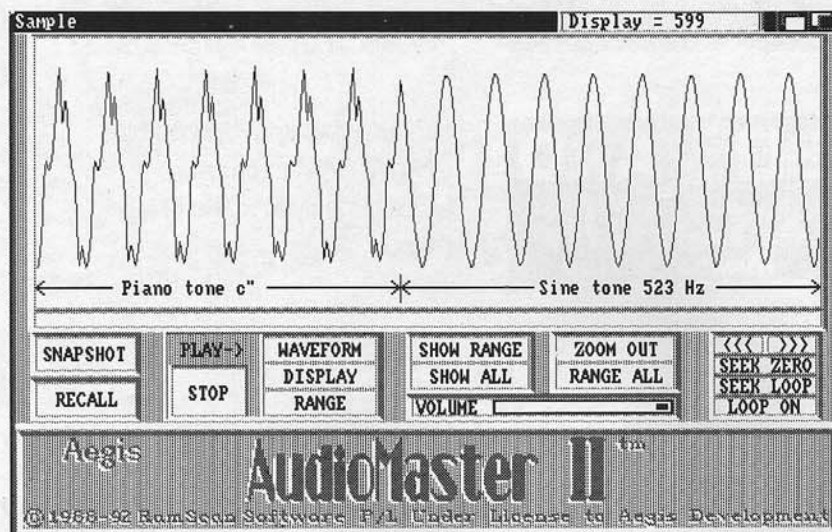
There is no question, however, that lower output levels also mean higher noise, which brings us to point two. The Paula chip can provide up to eight bit sounds, which therefore can have up to +/- 128 (256) levels of volume. Compared with analogue (infinite levels) and 16-bit (65,536 levels) sound, this is obviously the Amiga's weakest area of performance.

With eight bits available to describe a signal, the maximum difference between the loudest tone and system noise can be about 48 dB (decibels), which is roughly comparable with a compact cassette recorder without Dolby. In practice Amiga samplers hardly challenge this theoretical limit, with some even finding it difficult to match the 30 dB mark.

This obviously compares badly with the theoretical 96 dB offered by 16-bit computer sound and CDs.

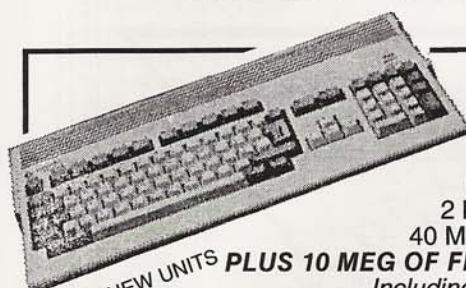
So is eight bit sound more noise than music? Fortunately not, unless you intend to use it for direct-to-(hard) disk recordings of complete events. Standard samples are usually pretty short and

The scope displays of many sampling programs allow evaluating the recorded signal. From this example it becomes clear why a piano tone of the same fundamental as a basic sine wave of 523 Hz (c'') sounds different. Responsible for the audible "distortions" that characterize the piano sound in practice are the number of peaks and dips deforming the pure sine oscillation



HUGE DISCOUNT SAVINGS ON ALL COMMODORE PRODUCTS

WE'RE OFFERING SUBSTANTIAL SAVINGS ON NEW AND EX DEMO AMIGA HARDWARE ALL THIS MONTH. THESE ARE A FEW EXAMPLES OF OUR RIDICULOUSLY LOW PRICES*



AMIGA 1200HD

3.5" Floppy drive
68E020 Processor
2 Megabytes of Ram
40 Megabyte Hard Disk

BRAND NEW UNITS PLUS 10 MEG OF FREE SOFTWARE!

Including games, graphics, music and digitised sound

Was \$1499

NOW \$995!

AMIGA HARDWARE

COMMODORE CDTV'S	399.00
1084S MONITORS (EX DEMO)	299.00
1084S MONITORS	399.00
SAMSUNG 9 PIN PRINTER	199.00
ALFA DATA RAM 1MEG A600	109.00
ALFA DATA RAM 512K/2MB A500	119.00

BURWOOD (OPEN 7 DAYS) 744 8809

185 BURWOOD ROAD

SYDNEY 261 4344

165 CASTLEREAGH STREET

PARRAMATTA 891 1170

SHOP21A GREENWAY ARCADE 222 CHURCH STREET

PENRITH (047) 32 3377

SHOP1 CARVAN ARCADE 289 HIGH STREET

NEWCASTLE (049) 42 1522

180 PACIFIC HIGHWAY CHARLESTOWN

GOSFORD (043) 23 7463

98 MANN STREET

MAIL ORDER (02) 638 2288

P.O. Box 19 Rydalmere NSW 2116

FREE BUYERS GUIDE NOW AVAILABLE!

Call in to any of our branches or mail this coupon to receive your free copy of our Winter Buyers guide.

Name _____

Address _____

Postcode _____

Post to: Computer Spot P.O. Box 19 Rydalmere NSW 2116

AMIGA SOFTWARE TO CLEAR

	WAS	NOW
AMI BACK	99.95	75.00
AMI BACK TOOLS	99.95	75.00
PAGESTREAM 2.2 BLOWOUT	299.00	179.00
PLUS OTHER TITLES INCLUDING...		

	WAS	NOW
BAR GAMES	49.95	2.95
BARBARIAN 2	59.95	4.95
BATTLE COMMAND	59.95	4.95
CONQUEST OF CAMELOT	79.95	19.95
CIRCUS ATTRACTIONS	49.95	2.95
DEEP SPACE	19.95	2.95
F16 FALCON	69.95	9.95
FLIGHT ACTION PACK	69.95	19.95
GRAND MONSTER SLAM	49.95	2.95
HEART OF CHINA	69.95	19.95
HOYLES GAMES	59.95	19.95
HEROES QUEST	79.95	14.95
INTERNATIONAL SPORTS	89.95	9.95
INDIANA JONES LAST CRUSADE	69.95	14.95
KNIGHTS OF THE SKY	89.95	19.95
OCEAN ACTION PACK	69.95	19.95
SUPER SPACE INVADERS	59.95	9.95
SUPER SEGA COMPILATION	69.95	14.95
THUNDERHAWK	69.95	14.95
VOLIFIED	59.95	9.95

STAR CURSOR JOYSTICK
WITH FREE
EXTENSION CABLE
\$49.95!

*** LIMITED STOCKS AT THESE PRICES. SO BE QUICK.**

JOIN THE SPOT CLUB FOR \$5 AND RECEIVE SPECIAL DISCOUNTS



NOT ALL ITEMS AVAILABLE IN ALL STORES. PRICES AND AVAILABILITY SUBJECT TO CHANGE WITHOUT NOTICE. E. & O. E.

restricted to a certain sound effect, like a single piano tone.

As long as there are no pauses or extremely quiet passages included, the intended sound will mask any unwanted noise and fool our ears into believing we are hearing a clean and natural sample. Most noise reduction systems built into analogue tape machines also take full advantage of this masking effect and only cut in during the softer parts of the reproduced material.

Building up a soundtrack from eight bit samples can produce high quality results which only experienced ears can tell from 16-bit, provided the samples have been correctly recorded.

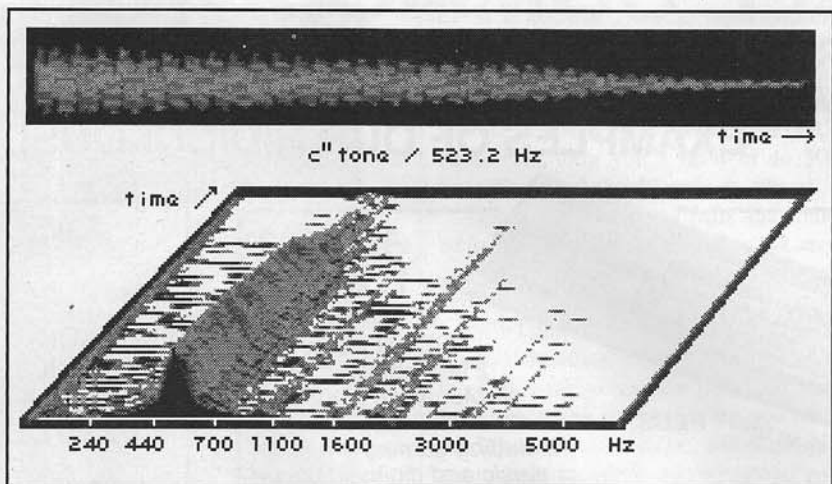
There are two major factors which have to be taken into account during sampling. The recording level adjustment is extremely critical. The input signal available to the sampler needs to be as strong as possible to keep hum, hiss and other noise to a minimum.

At the same time, peaks in the signal have to be kept down to a level where they can't produce saturation distortion. The scope facilities or VU/Peak level meters of some sampling software can be a good aid for achieving the right balance but may, at the same time, be rather confusing for the novice and thus easily lead to poor results.

Under those circumstances it is best to monitor the output signal from the computer via headphones while slowly increasing the record level until audible distortion occurs. After reducing the level again, very carefully, to the point where those distortions have just disappeared, recorded samples will be the best achievable with the equipment used.

This equipment includes the sound source, which should deliver a signal as clean as possible. That not only excludes AM broadcasts, but also FM stereo programs. Most tuners fail to filter out the 19 kHz pilot tone completely, resulting in nasty whistling tones produced by interference with the sampling frequency.

Even the hiss of cassette recorders may lead to some interference products, as can low quality, noisy microphone amplifiers.



This analysis of a ca. 500 Hz piano tone reveals a variety of frequency products (harmonics) up to almost 5000 Hz, which caused the distortions in picture 1. A good recording of this sound should therefore be sampled at a minimum rate of 10 kHz for natural results

Sampling it Right

The sampling rate, too, has to be chosen wisely. In contrast to the vast differences in dynamic range between eight and 16 bit sampling, both systems are equal here. The sampling rate, which sets how often per second the volume of the incoming signal is determined, should be at least twice the highest frequency that needs to be recorded.

Compact discs are produced with a sampling rate of 44.1 kHz, which allows for a frequency response to about 20 kHz. To achieve CD quality you therefore have to record 16-bit samples at 44.1 kHz. Unfortunately the resulting files are huge and thus unusable in many non-professional applications.

Using the eight bit format already halves that size without necessarily compromising quality too much, as mentioned above. If the sampling rate too is brought down to suit the task, some very manageable sample sizes can be produced with perfectly acceptable sound quality.

For example, a piano is capable of covering a tonal range from about 25 to 4,000 Hz, with overtones and harmonics extending to 7000 Hz. A sampling

rate of around 15,000 Hz would therefore be sufficient under many circumstances for sampling even the highest piano key, cutting the file size by more than half. The human (female) voice extends to around 10 kHz, while applause is as demanding as the triangle in a symphony orchestra with over 17,000 Hz and consequently would best be served by the CD sampling rate of 44.1 kHz if disk space allows.

Conclusion

As you can see, the current Amiga sound hardware is perfectly capable of producing high quality eight bit samples for use in sequencers and similar programs. 16-bit sound boards, presently only available from independent peripheral producers, become a must when direct-to-disk recordings of complete performances are intended or for extended samples with a high dynamic range.

If the basic rules concerning recording levels and sampling rates are followed, there is no reason why a home user should delay the purchase of one of the world's best computers just to wait for 16-bit sound. □

A Quick Intro to Desktop Video

H. Wynen tells how even a standard Amiga can be an invaluable tool in the production of exciting video footage when certain rules are followed.

It is hardly a secret that the Amiga is widely regarded as the most flexible, if not the BEST personal computer overall when it comes to multimedia applications, specifically in the area of video processing or manipulation.

The competition may have managed to catch up quite dangerously in recent times, but the latest AGA machines go a long way towards re-establishing Commodore's leading position in the fast growing field of desktop video - DTV.

Unfortunately, DTV is instantly associated with oddly named, expensive peripherals and software like video "Toasters" and "Roasters", 24-bit frame grabbers, "Art Departments" or media presentation systems reminding us of grand Italian opera stages.

As a consequence, it's easy to miss the fact that the Amiga is capable of providing great home video editing effects without having to mortgage said home. In fact, for a single five dollar note, or even less, public domain suppliers like Prime Artifax can provide disks filled with a wide choice of fonts and programs to produce professional looking titles and scene transitions without the need for any additional equipment.

Unfortunately, older Amigas have only a monochrome composite video output, so if you own one you'll have to live without colour in your presentations. If greyscale sounds a little too limiting for you, though it can give some excellent results, Commodore's TV adaptor A520 (picture 1) will provide full colour for around \$50.

The A520 is an essential accessory if you don't own an Amiga 1200 or better and don't want to invest in a genlock. The reason is simple.

Inferior Video

A composite video signal, as used in VCRs and home television sets, is far inferior to the RGB system employed in computer monitors. Sharpness and colour registration/saturation visibly suffer in a standard TV picture when compared with its computer counterpart, and video noise reduces the achievable quality even further.

To avoid later disappointment, it's therefore strongly advisable to ignore the crisp monitor picture when creating titles and/or graphics to be recorded onto

video tape. Instead it's best to hook up a television set or your monitor, if it has composite or Y/C (S-VHS/Hi8) inputs like Commodore's 1084S, to the outputs of the recording VCR.

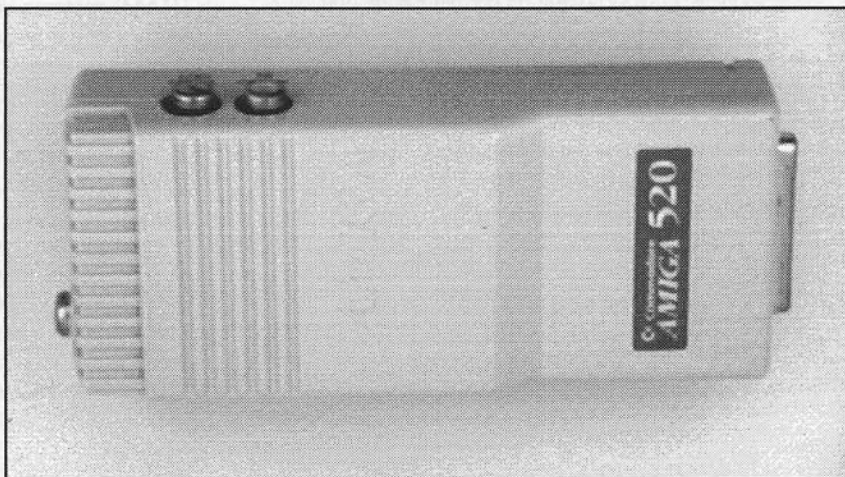
One word of advice is in order here. If you intend to get an A520 for video transfers, try to compare two or three units in the shop in an actual setup. You may be surprised at the difference in performance.

As the A520 performs a conversion of the computer's RGB signal into composite video, instead of a simple amplification, internal adjustments at the time of manufacture are quite critical and can easily be knocked off their optimum settings during transport to the end user.

There is also that eternal question of how well a manufacturer's quality control is implemented in practice. If reading standard Amiga text appears difficult because of excessive blur, or colours in graphics tend to bleed out of their boundaries, try another model. Although you can't expect monitor performance, well calibrated A520s are perfectly capable of delivering performance up to the standard required for more demanding, serious video productions.

As already mentioned, composite video is highly susceptible to colour bleeding and noise. Reduce the level of

Picture 1: For owners of older Amigas, Commodore's TV adaptor A 520 is the easiest and cheapest way of recording colour titles and/or graphics onto video tape



GSOFT Australia Pty Ltd,
is proud to provide:

**Reasonable prices and genuine
customer service, from
9:00 AM to 12 MIDNIGHT
7 DAYS a week!**

We trade at hours that suit YOU.

This months Specials:

TurboPrint Pro \$99

Call us if you need upgrade information

Audio Engineer Plus \$310

Aussie Made, Superior by Design

Other Products:

MULTI IO Card (for A2000/3000/4000)	\$450
TouchWindows	\$550
ROM Switcher	\$45
AX-2000 (inc 2Meg Agnus)	\$375
A1200 Memory (inc 2Meg)	\$550
SuperDJC (HP Deskjet Driver)	\$75
ArtExpression	\$269
ArtDep Pro	\$250
Morph Plus	\$275
TruePrint 24	\$96
Directory Opus	\$119
Vidi 12 Digitiser	\$275
HP Laserjet 4L	\$1250
Audio Engineer Junior	\$189
Super Sound Enhancer	\$99

New Products (IN STOCK!)

Video Backup System
High Density External Drives



GSOFT Australia Pty Ltd
PO Box 59, Elizabeth
South Australia 5114
Fax (08)254 2261
Phone (08)254 2261

Supporting AUSTRALIAN products.
Call us if you have a product to sell.



bleeding or ragged, pulsating colours until they stay inside their intended boundaries, by lowering colour intensity.

If the results are still not completely satisfactory, use a dark outline around letters or put the whole title in black boxes. A dark background swallows the flare caused by bleeding. In case you want to save your creations for repeated future use, make sure to reserve colour zero exclusively for the general background in all your graphics. Should you ever decide to obtain a genlock for more sophisticated video effects, those graphics could then still be used.

Colour Zero

In contrast to audio, any composite video signal contains synchronization pulses which make it impossible to mix two or more such signals unless all the pulses are perfectly in sync with each other. Devices to achieve that synchronization are called genlocks.

In the case of mixing computer signals with live video, the genlock has to perform an additional task to allow the overlaying of titles. It removes the background colour (makes it transparent) so the video behind the computer graphic is not obstructed from view in all areas occupied by that colour.

In most affordable genlocks the transparent colour is fixed as colour zero, the first in the palette, which should therefore not be used unless it is specifically intended to have the video picture coming through in that location. A future article will take a more in depth look at specific genlock applications like keying effects and white balance correction.

Fades and Wipes

Many titling programs, commercial or public domain, allow the scaling and distortion of fonts and the application of shadow effects (picture 2). Scrolling and wipe or fade transitions between pages are also quite common. In many cases it is possible to replace the plain background with an IFF graphic, often included in the transition effects or even equipped with their own, independent set of wipes.

Some may find it disappointing that Hold And Modify (HAM) pictures normally don't like being put behind titles, as they come very close in appearance to live video. However, video tends to smooth over sharp colour borders so even many digitized 32 colour and some monochrome 16 shade frame grabs can look quite adequate.

Many faults and shortcomings clearly visible on a monitor screen will simply disappear when run on a television set, especially if they were recorded to tape first (picture 3). When creating graphics for inclusion as a backdrop, it is always a good idea to keep some spare colours, e.g. using only 12 from the 16 available in the palette. The ones left may then be freely chosen and varied for titles without affecting the graphic. This is especially important when using digitised images which often contain very few or no pure colours at all, making it very difficult to achieve sufficient contrast to make the title stand out from the surroundings.



Picture 3: Although mono reproduction somewhat hides the differences, it is still obvious in this comparison that the losses caused by the recording to video tape in fact created a more natural look in the shadowed areas around the model's mouth and along the arm

Conclusion

With a genlock only required for putting graphics and/or titles over live video, every stock Amiga can be used for creating exciting visual effects to be recorded with a VCR.

If the creations are in full colour, it is preferable to judge their impact on a standard television set instead of the much sharper monitor screen. This helps

to avoid the most commonly made mistake of creating oversaturated colours the composite video standard can't handle.

Apart from this basic rule, only your individual creativity can be held responsible for the success or failure of your own video productions.

R***

Picture 2: In contrast to the A 520, a genlock allows replacing the background (colour 0) with live video. Titles with different fonts and effects can be created even by cheap or completely free non-commercial software, as in this example



SCANNER SOLUTIONS

UMAX

PLATBED SCANNER FOR AMIGA

RELEASED AT THE WORLD OF

COMMODORE SHOW

NOW AVAILABLE

MODELS RELEASED, AMIGA, PC & MAC

ENQUIRE NOW

AUSTRALIAN DISTRIBUTORS FOR

CLR & DEJA VU SOFTWARE

FREE CATALOGUE AVAILABLE ON

REQUEST

TITLES INCLUDE:

EDUCATIONAL

- CLE001 T.C. DINOSAURS (2 DISK)
- CLE003 T.C. SOLAR SYSTEM (3 DISK)
- CLE011 LET'S LEARN
- CLE016 KINGS & QUEENS
- DV091 FUN TO LEARN
- DV122 TELL THE TIME

UTILITIES

- CLU003 TYPING TUTOR
- CLU008 WORD FINDER PLUS
- CLU010 POWER ACCOUNTS
- DV077 POWERBASE
- DV098 POWERTEXT
- DV115 ROOTS

GAMES

- CLG008 DRAGON TILES
- CLG012 DULLDOZER BOB
- CLG014 SONIC SMARTIEHEAD
- DV127 THE VIKING SAGA
- DV128 TOWER HILL
- AUS003 LOST SOUL

1 DISK PROG \$14 RRP

2 DISK PROG \$15

3 DISK PROG \$16

DEJA VU & CLR TITLES ARE AVAILABLE FROM:

Don Quixote, Toowoomba Qld, Ph (076) 331 561

Korella Trading, Belmont NSW, Ph (049) 458 455

MVB Computers, Croydon Vic, Ph (03) 725 6255

Amiga PD Centre, St Agnes SA, Ph (08) 396 2163

Amadeus Computers, Glenorie NSW, Ph (088) 808 503

Phoenix Microtech, Keswick SA, Ph (08) 293 8752

Squire Computers, Eltham Vic, Ph (03) 431 2747

Code One Computers, Wentworth Falls NSW,

Ph (047) 57 3982

PRC Australia, Bendigo, (054) 416 054

Bright Electronics, Auckland NZ, Ph (09) 524 9543

WRITE OR PHONE NOW FOR YOUR
FREE CATALOGUE

ALLEN
COMPUTER SUPPLIES

Call for the Dealer
nearest you.

where you will get more for your dollar!

Call (03) 725 3379

Fax (03) 723 1780

432 Dorset Road,
Croydon Vic, 3136

Latest 3 Disk PD
Catalogue
\$6.00



Σ

s
i
g
m
a
c
o
m

02 524 9846

Σ

s
i
g
m
a
c
o
m

02 524 9846

AMIGA CD ROM Systems

At last, an internal/external CD ROM drive system for the *Amiga 500/2000/3000/4000*.

- This unit supports CDTV, ISO 9660, Hi-Sierra and Mac HFS formats, as well as playing audio CD's.
 - The software supports Kodak Photo CD, most SCSI controllers, is simple to install on any Amiga, and has a neat "Remote Control" panel for playing audio CDs.
 - Besides the growing range of CDTV titles, Mac and IBM PC CD disks can be used with your emulators.
 - Includes Fish Disk collection on CD ROM.
- Dealer Enquiries Welcome

Internal unit **\$795**

External unit **\$895**

August Special
Save \$100 on an
Internal
NEC CD ROM
\$699



Call for our CD ROM Software listing



Accelerators

New Derringer 030

Add 030 power to your
A500/A2000 inexpensively.

Modular Design lets you add '882 maths co-processor and 32-bit SIMM RAM in 1, 2, 4, 8 & 16 Meg upgrades as and when you need them.

- 68000 mode software selectable
- Surface-mount components for easy upgrade

With 2MB 32-bit RAM - **\$695**



Hard Driving

★ SCSI 2 Hard Drives ★

★ SPECIAL ★

★ 240Mb SCSI 2 **\$699**

★ 1.05 Gig SCSI 2 **\$2249**

GVP See opposite for truly exceptional prices.

Quantum Hard Drives

127 Megabytes	\$499
170 Megabytes	\$599
249 Megabytes	\$699
425 Megabytes	CALL
1.2 Gigabytes	CALL

New Products



★ SPECIALS ★

GVP 68040 33Mhz Accelerator
For Amiga 2000 includes space for 16 Mb
40ns RAM - **SAVE 50% \$2599**

AMIGA 1200

A1200 now available.

CALL

AMIGA 4000/040 & 4000/030

A4000 now available in 030 and 040 processor versions with various Hard Drive sizes. CALL



High Density Floppy Disk Drives

Yes, they are here! Stock is extremely limited, so hurry.

Price for Internal unit is \$249.

Phone for more details



Odds'n'Ends

AMIGA 1200 Upgrades

A1200 and A 600 upgrades to your processor, your hard drive etc.

CALL

★ Fax/Data/Answer-Machine Modem - All in one! **\$649**

The New VOIDAX supports up to 14,400 baud data, fax and includes a digital voice answering machine.

Optical Mouse \$99

Mouse Master \$59

Allows your Mouse and Joystick to share one port.

SOFTWARE

Scala MM200 AGA	\$399
Final Copy II	\$169
Cinemorph	\$249
Pro Page 3	SELLOUT \$139
Pro Page 4	\$249
Pro Draw #	\$199
Pro Calc	\$229
Wordworth 2	\$269
Imagine 2 & 3	CALL
Vista Pro V3	SPECIAL \$99
Bars and Pipes (New Version)	\$499
ImageFX	\$469
Real 3D V2	\$899
DPaint AGA	CALL

Announcement

SigmaCom has been appointed an NEC Dealer
You get the Savings!



A1230 40Mhz 68030 for A1200	From \$899
Impact 500 with 52Mb Quantum	Call
G-Force 25 Mhz with 68882 1Mb RAM	\$899
G-Force 40MHz with 68882 4Mb RAM	\$1599
G-Force 68040 for A2000 33 MHz	\$2599
G-Force 68040 for A3000	SPECIAL CALL
THE INCREDIBLE JUST GOT MORE SO	
Impact 2000 with 120Mb Quantum	\$799
Impact 2000 with 170Mb Quantum	\$899
Digital Sound Studio - Stereo Digitiser	\$169

Systems

Amiga 1200 and 4000 Systems available in a wide variety of configurations. Because we are also a fully Authorised Commodore Dealer, we can offer you no nonsense pricing and quality service.

Call for the price you want!

TRADE-IN

We happily trade-in any Amiga equipment
CALL US TODAY



Hi Res Cards

Retina 24 bit Card + V-LAB Framegrabber



Retina 24-bit Colour Card

offers resolutions up to 2400 x 1200, and interfaces to graphics libraries allowing most software to be run in much higher resolutions. Full 24-bit colour is available up to a resolution of 1152 x 862.

V-Lab is a 24-bit framegrabber designed to compliment the Retina or Harlequin boards. Both cards have full AdPro and Imagemaster drivers, as well as extensive developer libraries and docs.

Phone or call in for a Demonstration.



EX-DEMO

Amiga 2000 RAM Sale

2MB card exp to 8Mb Limited Stock	\$199
Amiga A2000 ex-demo bargains from	\$499
Amiga 500	\$299
GVP Impact 500 series II From	\$599
A590 20Mb HD + 2Mb RAM	\$499
IBM Emulators	Call
68020 & 68030 Accelerators	Call
All with warranty. Call for availability	



A1200 HD Upgrade

Swap your 40Mb Hard Drive or Add an extra drive to your Amiga 1200.

Size	Price to Swap	Price to Add as Second Drive
40Mb	NA	\$249
80Mb	\$349	\$499
127 Mb	\$549	\$699
210Mb	\$899	\$1049



Here are Seven Reasons to shop at SigmaCom

- FREE delivery in Australia
- FULL after-sales service
- FREE Technical advice
- FREE Hardware installation
- FREE Software installation
- Trade - ins always welcome
- Best Prices ALWAYS!



Visit our showroom at
Suite 17, 20 - 24 Gibbs Street,
Miranda -



sigmaCom
524 9846

Ph: (02)

• Mobile: (018) 25 7471

• Facsimile: (02) 524 9839

Phone Orders Welcome

HyperCache Professional

by Daniel Rutter

Anybody who's played with AmigaDOS will have noticed the AddBuffers command. It uses system RAM to make disk storage faster, by adding a number of RAM "buffers" to a device. Anything read from a device goes into that buffer, and if it's needed again it can be recalled from the buffer without accessing the disk. The more buffers you have, the further back this read history can go and the faster your floppy or hard drive seems to be.

But there's a lot more that can be done in software to accelerate disk devices. You can do prefetch, where blocks on either side of the one being read are read at the same time and buffered, so in the likely event that something near to the previous data is needed it'll already be waiting in the buffer. And with clever coding you can make sure that the system's most frequently used data stays in the cache while less desirable information is allowed to be replaced.

Until recently, there's only been one reliable cache program, *SmartDisk*. *SmartDisk* has some limitations, but it also has the great advantage of being public domain - free.

But now there's a choice, with local availability of *HyperCache Professional*, a program which does all *SmartDisk* does and more, for \$80.

But first, the cheap option. *SmartDisk* is available on Fish 754, from any good Amiga PD outlet. Its author, David Le Blanc, has released it into the public domain, so you need not register it or send anybody any money except what you pay for the disk it comes on. Tech-

nically, it's an '8-Way set associative' cache, with 8 sets, lines of 4 sectors with prefetch, and 32 lines. This adds up to $32 \times 4 \times 8 \times 512 = 524288$ bytes or 512 kilobytes of RAM used and sectors are 'prefetched' four at a time.

SmartDisk is simple to run - you just stick its name in your startup-sequence or user-startup with the name of your controller's device - so, for example, GVP users would use `gypsci.device` - and the unit number of the drive to be cached, and suddenly your drive is faster.

SmartDisk is not configurable - you tell it the device to cache, it gloms half a meg of RAM and you're in business. Its

major limitation is that it can't support multiple physical devices on one controller - if you have two or more hard drives running off the one controller and you use *SmartDisk* you're asking for a crash as it gets confused about which disk to talk to. Multiple partitions on one drive are okay, though, so for most users *SmartDisk* will be fine.

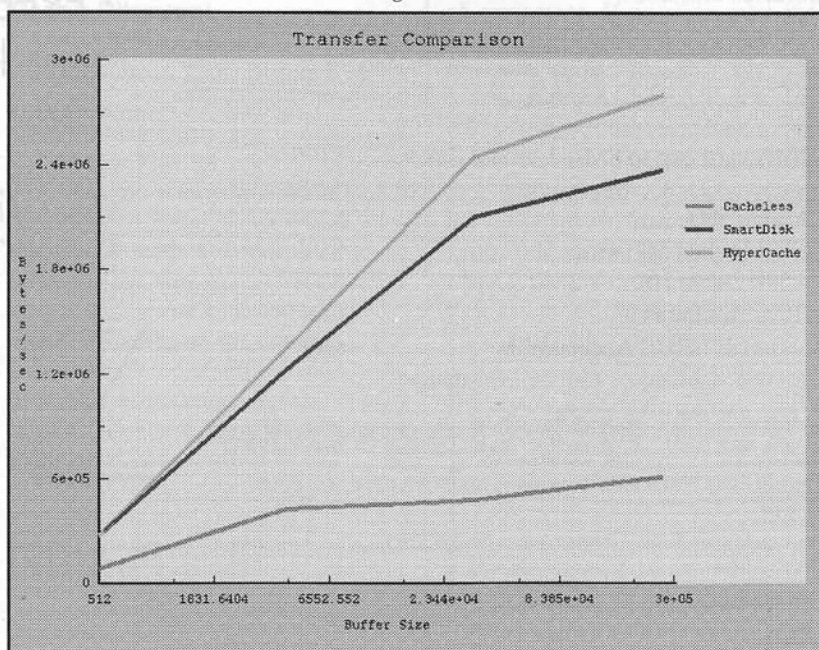
SmartDisk also can't cache floppies; not a terrible problem for most hard disk users, but something of a pain to the majority of Amiga owners, who still don't have a hard disk.

HyperCache, on the other hand, will cache as many devices on one controller as you like, but you have to start a new cache for each of them, which can be a real memory drain. This doesn't make *HyperCache* useless for people with less memory, though - it can provide useful acceleration even on a 512k floppy based machine. But the more RAM you feed it and the faster your processor is, the faster the end result will be.

HyperCache can also cache floppies, or indeed just about any disk storage device at all - any flavour of hard drive, floptical disks, removable hard drives, CD-ROMS, whatever.

As Figure 1 shows, both *HyperCache*

Figure 1



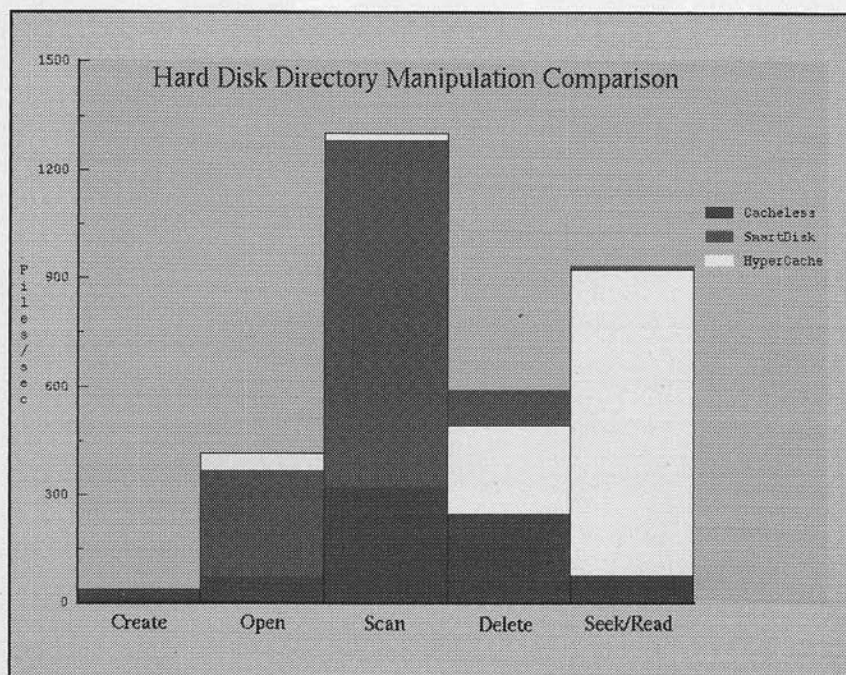


Figure 2

and *SmartDisk* are way faster than Addbuffers alone, with *HyperCache*'s slightly better design putting it a shade further ahead. The test machine is running a Maxtor 200Mb SCSI drive and has a 40MHz 68030 CPU, and 30 regular buffers were used on the drive. *HyperCache* was used with its default configuration, which is exactly the same as *SmartDisk*'s. The file create, read and write scores were averaged - file read is always much faster than the other two figures on cached systems.

Figure 2 shows that in directory manipulation, *HyperCache* wins on file open and scan, and *SmartDisk* beats it on file deletion and by a small margin in seek-read. File creation isn't significantly helped by either cache, but in every other department the caches beat regular buffers by miles.

And on floppies, *HyperCache* really shines. The test, as administered by DiskSpeed 4.2, is biased in favour of prefetching caches so your mileage will vary, but the difference will still be noticeable. I used a full 512k cache on the floppy, which is overkill, but give a good idea of the ceiling performance - which is a LONG way up on what we're used to!

In fact, the results for data transfer from floppies were too different to graph. While file create and write speeds were increased by only 10% or so, file reads went through the roof, thanks to all the data being prefetched into the

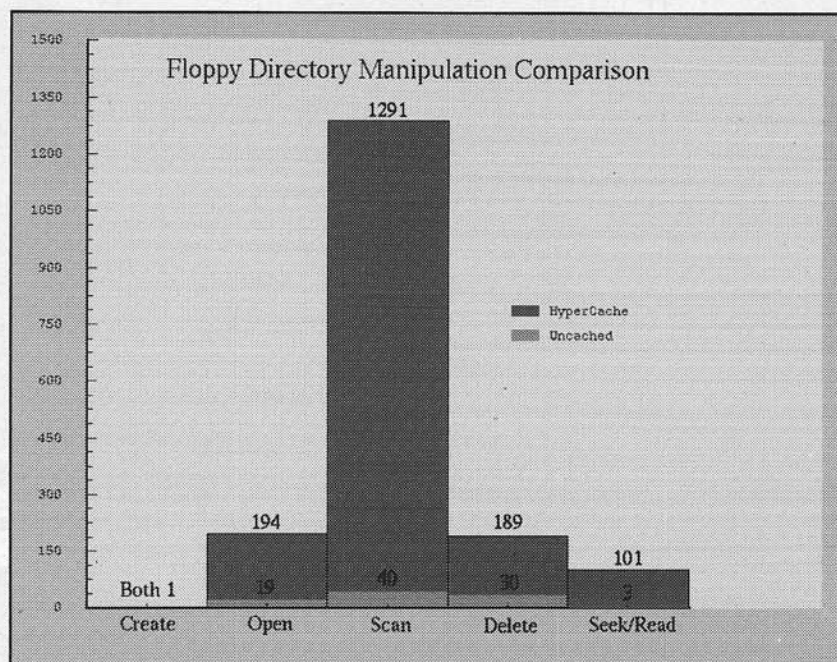
cache and read operations never really touching the floppy itself at all. The best read figure, for the 256k cache, was more than 1.2 megabytes per second - compared with about 21 KILOBYTES without the cache!

A more meaningful figure came from the directory scan, as shown in Figure 3. Again, the test is slanted for *HyperCache* and the cache is bigger than most people would use, but you can see that even if you only get a quarter of the speed you're still a long way ahead on everything except, as usual, file creation.

So who will use *SmartDisk*? People with more than one hard disk on their controller. People who want fast floppies. Power users with big processors - *HyperCache* could have been MADE for A4000 owners, stuck with relatively slow IDE hard disks but with gigantic CPUs. And at only \$80 from Amadeus Computers, it's not a major purchase.

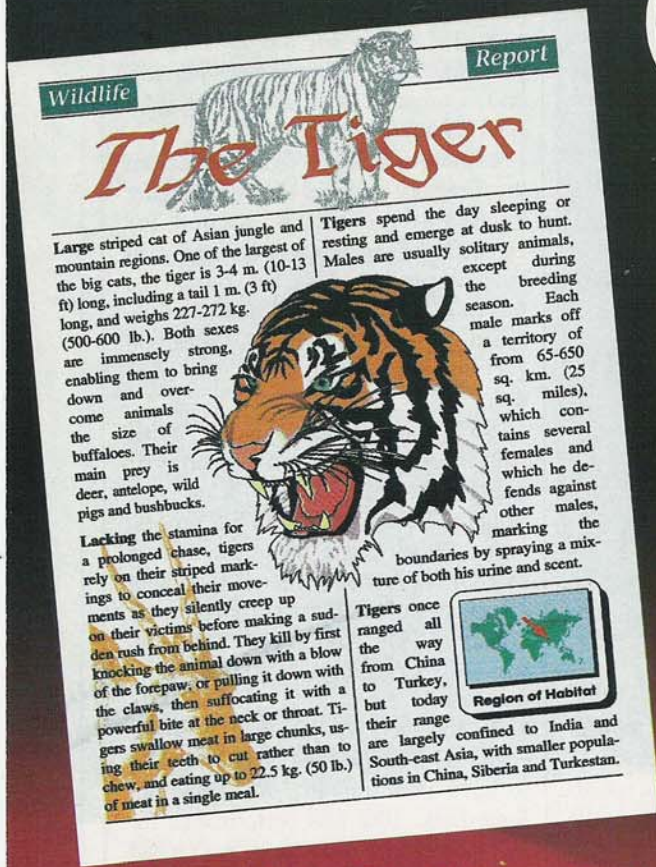
If, however, you just want a simple cache for a single hard drive and want to save your money, do check out *SmartDisk*. 10% less performance for less than a tenth of the price isn't a bad deal at all. □

Figure 3



The Best Word Publish (Amiga Format's

We'd simply call it the best Amiga Word Processor. But if after using it, the experts insist on calling Final Copy II the best Word Publisher as well, we're not complaining!



**Final Copy coined the phrase "Perfect Printing on any Printer".
We mean it - this document proves it!**

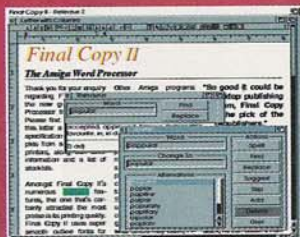
Created in Final Copy II and printed on a standard 24-pin Citizen, it shows a small number of Final Copy II's features: Smooth Scaleable Outline Fonts, Multiple Columns, Drawing Tools for Boxes, Borders, Shadows, Lines and Arrows, White-Out Text, Text Printed over Graphic Images, Text Obliquing, Auto-Flow Text around Graphics and of course, Import of Colour and Mono Graphics Pictures.



Look for the Australia/NZ sticker on the box as your guarantee of technical support and future upgrades.

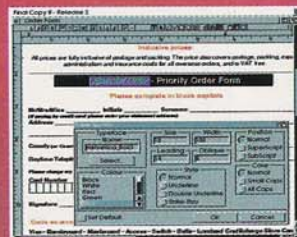
Final

Word Publishers go beyond simply producing normal letters and documents (at which Final Copy II naturally excels) and progress into a world where how the whole document looks is just as important as what it says. Admittedly, this can be achieved with Desk Top Publishers, but they can't easily be used as Word Processors, especially when a good looking letter needs creating quickly - they're far too cumbersome. This is where Final Copy II offers the perfect balance between the two requirements. Ease and speed of use, combined with complete control and perfect final printed presentation.



Document creation is so simple with 28 On-Screen Buttons for routine formatting and navigating commands, like Auto-Hyphenation. With true WYSIWYG display, you can even edit whilst your pages are magnified up to 400% (or reduced). Long documents are supported with Title/Master Pages, Style Sheets, Left/Right Page Binding Offset and Auto Numbering. Because your text needs to be perfect, the British-English Collins Proximity Speller combined with the Thesaurus (for that added inspiration) help you to produce the precise, printed page.

Compugraphic, Adobe Type 1 PostScript or Nimbus Q PostScript? If you want lots of fonts, you can have lots of fonts! Final Copy II can use thousands of superior Adobe Type 1 or Nimbus Q fonts (the same as those used on professional publishing systems). Both these types are PostScript fonts, but unlike all other Word Processors you don't need an expensive PostScript laser to use them! Final Copy II will print them on PostScript lasers, or any graphics capable printer. This includes the dot-matrix or ink-jet you probably already own. Even if you have your own Compugraphic* font library you'd still like to use, Final Copy II is fully



compatible, outputting to any graphic printer. Final Copy II is unrivalled in its range of fonts supported, and as you can see here, you have complete control over text formatting. When using the outline typefaces included, or any additional fonts, they'll output perfectly - no matter what size they're scaled to - with absolutely no jaggies! Opening multiple documents also allows editing whilst printing in background mode (free memory dependent).

Compatible with all Amigas from A500 to the latest A1200/A4000 ranges with either a second floppy or a hard drive. A minimum of 1Mb. of available free RAM is required (A600 hard drive - 1.5Mb.) however, as with all advanced graphical programs, extra memory (eg. 1.5/2Mb. - the more the better) will be required to exploit all features fully.

Available from all good Amiga Software Dealers,
or from TupSoft, (Australia) - please phone for a list of nationwide stockists.

ing Program of its Type words not ours)



CopyII

Release 2.0 (AGA)

Complete control over how your documents look, now you have it! Final Copy II incorporates: On-Screen Drawing Tools for generating boxes, borders, and lines or arrows at any angle, Multiple Newspaper Style snaking columns, combined with the unique ability to print the same PostScript quality outline fonts - on absolutely any printer in portrait or landscape. These all mean that no matter what you may have thought, no other Amiga Word Processor has all the capabilities that Final Copy II users now simply take for granted!



The almost endless list of features includes On-Screen Object Drawing Tools (no more importing of borders from drawing packages to frame graphics or reverse-highlight text) with selectable rulers to aid precise positioning. Text Auto-Flows around graphic objects and imported pictures, which can be placed anywhere, scaled and cropped, with no loss of printing quality. Text can also be printed actually over graphics (refer to "The Tiger" heading on our document). No other Word Processor for the Amiga offers all this. (*Compographic fonts require Kickstart 2 and Workbench 2.1 or later, with Final Copy II. They will not output on PostScript printers from any Word Processor - and would always be our second choice. ‡All fonts used in Final Copy II can print to the highest resolution that the printer will output).

Distributed and Supported throughout Australia & New Zealand by...

TupSoft (Australia)

TupSoft 9 Miller Avenue Hornsby NSW 2077 Tel: (02) 477 5353 Fax: (02) 476 5736

Amiga Format think we have the Best Word Publisher. We'll show you why with a list of features that users tell us are important (below).

If you'd like to know who's also chosen Final Copy, Commodore specify it as an option with some of the most powerful Amigas available in the United States. What better recommendation could you have?

	Feature	Wordworth 2	Final Copy II
Fonts and Printing	Compatible with Standard Amiga Workbench 2 Compographic Fonts	YES	YES, But would Suggest use of Better PostScript Fonts
	Compatible with Standard Adobe Type 1 and Nimbus Q Scalable PostScript Fonts	NO/NO	YES/YES
	PostScript Font Outlines on all Printers	NO	YES
	Maximum Number of PostScript Fonts	Limited to a total of 36	Infinite
	Download Extra Fonts to PostScript Printer	NO, Can't download extra fonts	YES, Automatic
	Landscape (Sideways) Printing on all Printers	NO	YES, Automatic
	Reclaim Printing Resolution (Quality) of Scaled (Reduced and Enlarged) Graphic Images	NO	YES, Same High Quality when Reduced and Enlarged
	Print any Text or Graphic in Colour	YES	YES
	No. of Colours Printed in Imported Pictures	Limited by Screen Mode Used	Output as Original Image
	Graphics Printing (HAM & IFF ILBM)	Good if Graphics not Scaled	Always Best Possible
Graphics	Text Width (Compress and Expand)	NO	YES
	Variable Text Obliquing (Slanted Text)	NO	YES
	Both Positive and Negative Attributes	NO	YES
	Box, Rounded Box, Circle, Oval, Line, Variable Border & Arrow Drawing Tools	NO	YES
	Crop (Trim) to Size Imported Graphics	NO	YES
	Supports A1200/4000 AGA Chipset	YES, 256 On-Screen Colours	YES, 256 On-Screen Colours
	Create Border around Graphics and Pictures	NO	YES
	British-English Spelling Checker	YES, Collins Proximity with Legal & Medical Supplements	YES, Collins Proximity with Legal & Medical Supplements
	British-English Thesaurus	YES, Collins 826000 Synonyms	YES, Collins 826000 Synonyms
	Page View Magnifications and Reductions	One Fixed Print Preview	7 Variable stages - 25% to 400%
Editing and Formatting	Edit Document while Magnified or Reduced	NO	YES
	Search & Replace (150 words in 9000, 7 Pages)	61 Seconds (On Amiga A1200)	7 Seconds (On Amiga A1200)
	Index and Table of Contents	YES, Automatic	NO, Requires Manual Entry
	Multiple Newspaper Style Snaking Columns	YES, 2 to 32	YES, 2 to 6
	Style Sheets, Master Pages, Title Pages	NO	YES
	Uses Standard Amiga Clipboard for Cutting & Pasting to and from Different Applications	NO	YES
	Small Caps Typographical Control	NO	YES
	Conforms to Commodore's Amiga Standard 'Look & Feel' Guidelines	NO, Non Standard User Interface	YES
	On-Screen Maths (Column Addition)	NO	YES
	Import ASCII Text from any Word Processor	YES	YES
General Features	Registration, Upgrade and Support	YES	YES
	Free Memory Required	15Mb. Minimum More Recommended	1Mb. Minimum More Recommended
	Ongoing Technical Phone Support	Contact Distributor	YES, Free of Charge
	Recommended Retail Price	\$269.00	\$199.95

SoftWood - Quality software for your Amiga
With Final Copy II you're not just getting a one off product! SoftWood are acknowledged as the World's leading software company who develop for the Amiga, and no other system. Once you're a registered SoftWood product owner, you'll be gaining access to unlimited free technical support (others may charge), and preferential upgrades to new versions of this and other exciting products being developed right now!

Please rush my personal copy of the new Final Copy II information pack, including samples from popular printers, and a list of stockists to... (clip the coupon or call (02) 477 5353 now!)

Name & Address:

Wordworth & Digita are trademarks of Digita Holdings Ltd. Compographic is a trademark of Miles Inc. Adobe & PostScript are trademarks of Adobe Inc. All other trademarks used are acknowledged.

Education

The New Improved Australian Graphics Atlas

by Stan Nirenberg

Australian Graphics Atlas has now made it to version 3.5. In the process, it has grown bigger and better, this time offering many of the modules that were previously available separately. *Graphics Atlas* is a set of maps, photographs and statistical information about Australia and Antarctica that can be accessed from the screen of an Amiga.

This is a big program - it requires at least 1 Mbyte of RAM and two floppy disk drives to operate, although a hard disk is extremely beneficial, as is additional RAM. The program is delivered in compressed form on seven floppies. It requires almost 9 MByte of hard disk space or 14 floppy disks when decompressed to its final useable state. The whole package is enclosed in a handsome plastic folder and comes with a comprehensive 33 page manual.

Installation

Before using the *Atlas*, the program must be installed onto either a hard drive (the preferred destination) or a number of floppy disks. A very user friendly installation program is included to take care of this task and a readme file on the main program disk explains what is involved.

The installation program has three lev-

els of settings to suit rank beginners as well as the expert Amiga user who may want to customise his or her installation. The user has the option of installing onto a hard drive or floppy disks. In addition, the installation program allows the user to make a dry run (ie, goes through the motions of installing) before committing *Atlas* to disk, and online help is available if any questions come to mind.

For those who do not have a hard disk, a set of colourful labels has been provided to stick onto the floppy disks for easy identification. However, be warned that a fair amount of disk swapping will be required to operate in this mode.

Up and Running

As it comes, *Atlas* is extremely is easy to use. Although it is based on

AmigaVision as its display engine, it comes prepackaged with a runtime version which allows the user to simply double click on an icon and *Atlas* is off and running. *Atlas* may also be operated from *AmigaVision* (purchased separately) which then allows the user to modify the way *Atlas* is viewed.

Navigating within the program itself could not be simpler. The user is given a set of selection boxes which are activated by the mouse to bring up the desired screens of information. The instructions provided are more than adequate to guide any level of user, and it doesn't take long to become proficient at running *Atlas*.

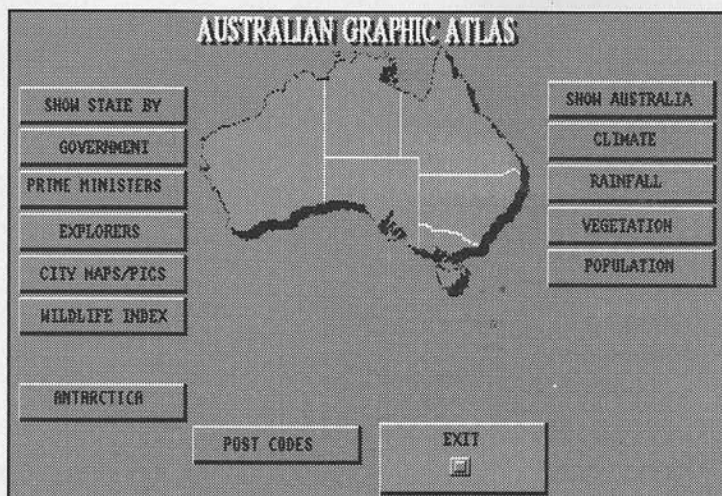
Atlas is not copy protected, and it multitasks in an Amiga with sufficient memory.

This is useful if you want to write an assignment in the background or if you want to capture screen images for inclusion in your assignment.

Features

Atlas is, as the name suggests, a pictorial atlas of Australia. It offers the ability to view Australia the continent and individual states along many dimensions. Not only can you obtain standard geographical information such as land relief, land use, national parks, capital city maps and climatic information, but a lot of historical information is also provided. Amongst the information presented is a set of scanned photographs relevant to the topic under investigation and this includes scenes from Antarctica (landscapes, ani-

Main selection screen



CORRECTION

In the July Issue of ACAR I incorrectly gave the price of *Back to Basics* as \$39.95. It should have been \$55. Sorry about the confusion.

Solutions Rendered

We give you the complete solution!

Call Mike, Doug or Jeroen on **(02) 477 5353**
or fax us your requirements on **(02) 476 5736**

Mail & Credit Card orders welcome.

Solutions Rendered Pty Ltd. ACN 057923645

9 Miller Avenue, Hornsby NSW 2077

We are a team dedicated to bringing you the best in Amiga desktop video and desktop publishing. We use and support the products we sell.

NOW AVAILABLE POWER COMPUTING products -

- PC1204 4Mb 32-bit Fast Ram Expansion with clock or as above with 20Mhz 68881 FPU.
- Hand Scanners - 100-400 dpi B/W (64 greyscales).
- 200 dpi Colour for A2000/3000/4000.
- Home Music Kit - 8 bit Stereo audio digitiser with F/X.
- Midi Interface - best value in town.
- Auto Rom Sharer boards - available with 1.3 or 2.0 roms.

CALL for SPECIAL pricing on the above items!

Hot Hardware

- OpalVision Release 2 - New modules available soon.
- Epson A4 full colour flatbed scanner - scans in 24 bit colour or 8 bit grey scales. OCR software available.
- Retina 24 bit High Resolution display card.
- V-Lab Y/C Real Time Frame Grabber.

Multi-Media, Film & Video Services

- Graphic Design - Illustration, logos, business presentations.
- Rendering & Animation - Cel animation and 3D Ray-tracing for film or video.
- Multi-Media presentations.

DTP Services available

- Laser Printing Service - 300dpi postscript printing.
- Full Colour glossy 300dpi printing service
A4 or A3 prints of your graphic masterpiece.
- Scanning - Up to A4 full colour or B/W.
- Complete Artwork and Design service - Illustration, company logos, business presentations, catalogues, etc

Hot Software

- Final Copy II Release 2
- SoftFaces Vol 1-4
- PageStream 2.2
- Art Expression
- TypeSmith - Outline font Editor.
- Scenery Animator 4.0
- Ami-Back
- Ami-Back Tools
- Ami-Back + Tools
- CineMorph
- Art Department Pro
- Morph Plus
- Vista Pro 3.0
- Scala MM210 AGA
- Deluxe Paint IV AGA
- Directory Opus V4
- Keep Track - database with calendar, diary & to-do list
- PowerCopy Professional
- Real 3D V2
- TV Paint 2.0 for Retina or IV24
- Bars & Pipes Pro V2
- Studio Printer
- IntroCad Plus
- Imagine 2.0
- Essence for Imagine
- CycleMan for Imagine
- True Print 24
- SAS/C V6 Development System
- Devpac 3
- High Speed Pascal
- Your Family Tree
- Hypercache Pro
- Brilliance - available soon
and much more...

mals, bases), highlights from each of the capital cities and pictures of various native plants and animals.

The following information is available:

- State maps showing relief, land use and National Parks
- Members of Parliament (Senate and House of Representatives)
- Explorers of Australia, including routes travelled by, pictures of and biographical information about the explorers
- City maps and pictures, including street maps of capital cities
- A wildlife index of some 32 Australian animals, including pictures and information
- Climatic and rainfall information about each State
- Vegetation types and their distribution by state
- Population statistics, including historic growth trends from early settlement.

The additional modules that have been included with *Atlas* are:

- Antarctica, which shows information about the landscape, climate, wildlife and explorers
- Prime Ministers, which provides a complete listing of Australia's Prime Ministers since Federation, their term of office, pictures and biographical and historical notes. Photographs of parliament have been provided as well as floor plans and seating arrangements in both chambers
- A Postcode Utility

Apart from the Postcode utility, the other modules of *Atlas* provided a wonderful pictorial tutorial of Australia. One of the strong features of *Atlas* is the ability to extract the information in pictorial format for use in written assignments or reports (with the help of a wordprocessor or DTP package) and multimedia presentations; all screens are stored in standard IFF format. In addition, if you own a copy of *AmigaVision* (purchase it with *Atlas*) than you can easily modify the way *Atlas* is presented. This allows *Atlas* to be specifically tailored to meet the required teaching curriculum.

The good, the bad and the unknown

There really is very little to criticise about *Australian Graphic Atlas*, and the benefits certainly outweigh any small shortcomings.



Scanned photographs are included - Ayers Rock

Again, I must reiterate that this is a big program and therefore is best run on an Amiga with two or more Megs of RAM and a hard drive (although it will operate on a machine with at least 1 Meg of RAM and two floppies). Even with a hard drive, the going can be slow at times. However, the wait is more than offset by the quality of the presentation.

All the pictorial material, including drawings and photographs, is excellent, limited only, perhaps, by the Amiga's low resolution in HAM mode. The choice of pictures was such that display resolution does not seriously impair what is seen on the screen. Hopefully, a subsequent version of *Atlas* will take advantage of the new Amiga chip set (1200 and 4000 Amigas).

As with any software that provides demographic, statistical or political information, currency is always an issue. *Atlas* V3.5 is very new and most of the information is up to date. Being an Australian product, support in the form of updated information should always be available.

I want to raise the issue of using the elements of *Atlas* in presentations. The size of the package is so large, that I found it difficult without assistance to find where the pictures I wanted to use were located. In fact, I found it easier to use a screen capture program to grab the images for this article than to copy the desired image files. I think that a future edition of the handbook should give a

listing of the files that are provided and where they may be found.

The only disappointing part of the program was the Postcodes utility. It did not seem to want to carry out all the search and sort functions that it is supposedly capable of. However, it was still possible to extract postcodes of any postal centre in Australia.

Summary

Australian Graphics Atlas is a great product that can be used in schools and in the home. It provides an interesting approach to learning about Australian geography and history. Its strongest point is the ability to modify the way *Atlas* is presented (through *AmigaVision*) as well as the providing a source of material for written and multimedia presentations. In

FACT FILE

Title: Australian Graphics Atlas V3.5 (with Antarctica, Post Codes, Prime Ministers)

Publisher: HC Software Pty Ltd, (08) 262 4461

Distributor: HC Software Pty Ltd

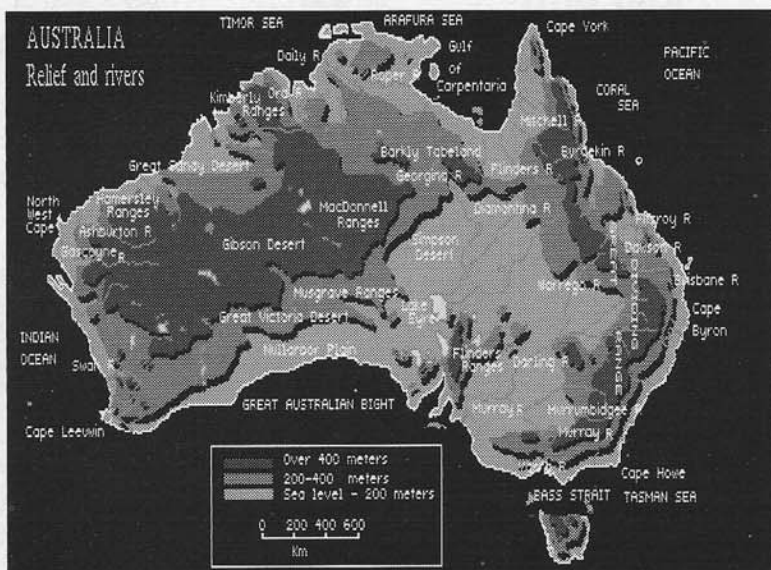
RRP: \$89.95

Category: Geography

Comments: Colourful introduction to Australian geography and more!

Age Group: 7+

Rating: ****



Land relief and rivers

addition, it is one of only a few products that has an exclusively Australian perspective. And we must not overlook the fact that because AGA is Australian made, full expert local support will be available.

Other products

HC Software, the maker of *Australian Graphics Atlas*, has also available the following products: *Antarctica* with run time, *Australian Postcodes* with runtime, *Demographics* with runtime, *Journey Through a Cell*, *Record Manager*, *NapGAP*.

Note that some of these are available as Lab Packs for use in schools. In addition,

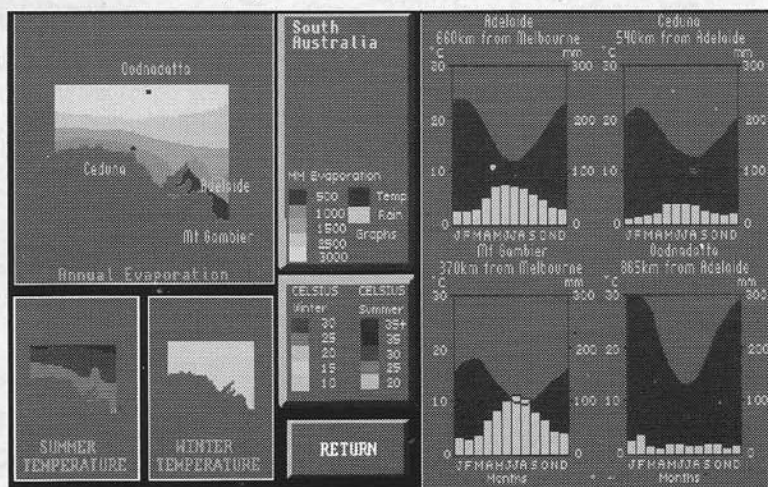
a floptical version of *Atlas* is available and for those people with IBM compatible computers, a *Windows* version may be purchased. New products in the pipeline include *Pacific Islands* and *Atlas of the Solar System* (sounds great!).

HC Software may be contacted by phone on (08) 262 4461 and Fax on (08) 262 8229. Their address is PO Box 782, Prospect East, SA, 5082.

Reader feedback

As usual, please write in with your comments, questions, etc to me care of ACAR or directly to PO Box 136, Forest Hill, Vic 3131. ☐

A profile on South Australia's climate



The Australian COMMODORE & AMIGA Review

Make sure of getting
your copy
Subscribe now!

Please enrol me for a issue
subscription to *The Australian
Commodore & Amiga Review*,
commencing with the issue.
I enclose a cheque/money order for
\$.....

Please charge my Bankcard, Visa
Mastercard:

Card number:

Expiry date:/.....

Name:

Address:

Postcode:

Please tick applicable:

First Subscription ☐

Renewal ☐

To: **Saturday Magazine P/L**
21 Darley Road,
Randwick NSW 2031
Phone: (02) 398 5111
Fax: (02) 398 5322

Rates within Australia:

6 issues \$20.00 (inc. postage)

12 issues \$38.00 (inc. postage)

New Zealand: (inc. airmail postage)

6 issues Aus \$34.00

12 issues Aus \$68.00



DON'T PANIC CALL ROB NOW

AMI-TECH

For the latest in Amiga Technology

★ ProPage 4.0 \$149
★ PageStream 2.2 \$149
High Density Floppy Disk
Internal \$249
External \$299

Turn your A500 into a Laser
Add an internal 40Mb Slimline
don't lose your Internal Floppy

New AMIGAs

New Amiga 1200 or 4000 systems set up to your requirements - 030 or 040, 120 Mb - 1.2Gig hard drive and 2 - 16 Meg RAM, 1960 Multisync or better? **Your choice.**
AMIGA 4000 Tower
From \$5500

Your Specifications.
AMIGA 4000

120 Mb Hard Drive - Upgrade available. RAM expandable to 16Meg
on board. 25Mhz 030/ 040 - Chip Upgradeable to 060

AMIGA 1200

40 Mb Hard Drive - Upgrades available to 120Mb or more
From \$1195

Hard Drives

Suit A590 upgrades & SCSI controllers.
External cases available. \$375

52 Mb Quantum \$695
170 Mb Quantum \$895
240 Mb Quantum

Call for other sizes.

Syquest Removable Media \$745

44 Mb drive with 1 cartridge \$1049

88 Mb drive with 1 cartridge \$1295

105 Mb drive with 1 cartridge \$245

External case & power supply Call

20Mb Floptical Drive & cartridge Call

Floppy Drives

1.44 Mb HD floppy \$249

Internal 3.5" Drive A500 \$175

Ext. Roctec Super-Slim 3.5" FD \$165

External 5.25" Drive Call

Accelerators

Impact 500 with 52Mb Quantum From \$899
Rocket Launcher 50Mhz speed-up for C 2630 \$995

PC286 16 Emulator to suit \$375

A600Hard Drives From \$300

Impact 2000 Card From \$345

Impact 2000 Hard Card with other drives Call

RAM to suit Impact 2000 cards 2Mb \$170

GVP 68040 for A2000/A3000 33 MHz \$2200

GVP GLock Genlock \$895

GVP A530 turbodrives, for trade-ups - Call \$179

Digital Sound Studio - Stereo Digitiser

Stereo Speakers for Multisync monitors \$59 & \$99

ADDISON & WESLEY Manuals All in Stock

Software

• Real 3D Version 2 • Vidi 12

• Imagine • Brilliance

• AdPro V2.2 • Broadcast Titler II

• Bars n' Pipes V2 • Image Master \$149

• Professionals Page 4.0 \$149

• PageStream 2.2

Complete PD library in stock

Ex-Demo Stock

A500 512K with mouse, manuals, \$299

original Workbench disks. \$69

A510 expansions \$275

SRAM 500 \$149

A2091 Controller Card \$399

AT-Once Emulator \$599

A2091 with 52 Mb Quantum

For A500

Rev6A Motherboard Upgrade \$245

Workbench 2.04 ROM \$89

BIGFOOT 200W Power supply \$175

A3000 52Meg/6MbRAM \$1495

Workbench 2.x ROM Upgrade \$85

Kickboard (For 2 or 3 Kickstart \$49

ROMs switchable) \$500

A2000 Ex Demo Call

Ex-Demo 2620, 2630, GVP \$360

ICD AdSpeed 16Mhz for A500 \$360

Blizzard Boards 14mhz and RAM (Up \$Call

ALL CUSTOM CHIPS

Trade-ins always welcome on any Amiga products

RAM Expansion

ICD AdRAM for A500. "The most reliable & compatible of this type of expansions." Uses A501 slot. 1-4 Meg ChipRAM. Supplied Standard with 1 Meg Chip RAM \$245
Price Per extra Meg \$90

GVP "RAM 8" for A2000 2-8Meg \$39

RAM Supplied @Meg Fitted \$90

A600 memory expansion units \$2

8Mb Card for A2000

A3000 static Column mode

FAST RAM Per Mb

GVP RAM

to suit Impact 2000 per 2Meg

X RAM units 2Mb Chip

DKB MegaChip 2000

2 Meg Chip RAM Upgrade

We carry hard to get software, so ring and be surprised
If you don't see it listed here... we probably have it
so CALL for our Best Price
Technical and Service enquiries welcome

GVP CSN ICD

D

ptop!
e HD &
copy.

Derringer '030

A500/A2000 - add '030 Accelerator power
ively with CSA's Single board 68030 Accelerator.
nger's modular design allows you to add the items you want as
them. The 030 board runs at 25/33 or 50Mhz. Add an '882 maths
ssor and 32-bit SIMM RAM on to the motherboard as you want.
IMs come in 1, 2, 4, 8 and 16 Megabyte modules (32 Megabyte
s in the future). No daughterboard is required! The Derringer 030
uilt-in Memory Management Unit (MMU) and can remap Kickstart
2.04 into 32-bit RAM through special hardware built into the
ger. 68000 mode is selectable via software or hardware.
ce-mount component design for reliability and performance!

1Mhz Derringer 68030
in 2MB 32-bit RAM -

1Mhz Derringer with
B 32-bit RAM - \$1195
1Mhz Derringer with
1B 32-bit RAM - \$1395

While Stock Lasts
Derringer '030
with RAM & Coprocessor
\$699

Amiga 1200 - 4000 upgrades

4000 4091 SCSI II Card	From \$599
A1200/600 Hard Drive upgrade	From \$350
A1200 Memory upgrade	From \$279
A600 Memory upgrade	From \$129
Retina 24bit Colour Cards	From \$799
V-Lab Digitizer 1028 x 2056 onscreen	From \$699
DCTV 24bit digitizer/animation	\$595
Rocgen Genlock	\$395
GVP IV-24 Incredible!	\$2400
ICD Flicker Free II	\$475
Scanners & OCR	From \$475
CDROM Drives.	From \$795
Comes with Fish CDs	External \$895 Internal \$645

VOIDAX II 14 400bps
Voice, Data & Fax modem

What will you see on the Amitech WOC stand?

Do you want to try out the **IV24** in a **4000**, or a
Retina board running **TV Paint**? Like to see
OpalVision on an **040** or test drive the **Multi-**
Platform Amiga from Heaven!!!
All are fully installed **only** at stand 32 WOC Darling
Harbour. Take one home with you!
Mail/Phone orders always welcome.

Amitech is open
9 to 5 Monday to Saturday
and for *latenight shopping* on *Thursdays*

What's new.

The Big news is our New team Member. Amitech is Very Proud to
welcome Andrew Zografos, Zoggy to most Amiga people, on board
Andrew was the Head Technical Service Advisor at Commodore
Business Machines for 13 years. He will ensure the highest level of
Service excellence and support for Amitech's customers.

The Show in Darling Harbour was a very busy time for us all here at
Amitech. So I have not been able to hunt down as many new
products as I had hoped.

But . . . what I do have is a Selection of very hot items.
High Density internal Floppy Disk Drives at \$249.00 and external
models for \$299.

We have a selection of removable harddrives starting at \$99.
Finally, a few of you might have seen the A4000 Tower at the
WOC. It is available now and you can order it to your own
specifications. From \$5500.

We still have the special version of the 2091 card with 7.04
ROMS and '040 optimization for the A4000..

I will have heaps more next month.
Regards Rob.

EMPLANT - the ONE Emulator \$799

Finally . . . ONE board to emulate ANY Computer or OS on your Amiga in
full colour, AGA or 24bit and keep the Multi-tasking going.
Any A500/1000 A2000/2500 or 3000 can now use Apple or PC software
as this board emulates the OS in RAM. It has highspeed dual serial
interface (independently usable from Amiga) and completely supports
Apple Talk for Mac printers etc. The SCSI interface (optional) supports up
to 7 SCSI devices at once including CD ROM and Tape Backup.
Emplant runs at 80 - 85% the speed of a Mac Quadra!
Supports Custom EPROMS, SIMM modules & Static RAM.
Mac ROMs not included.

Build an A1200 Workstation! \$1395

CSA's Twelve Gauge! 050Mhz
50 MHz 68030 "Burst Mode" DRAM accelerator + 50 MHz 68882 socket
Special 40 MHz 68EC030 version available
Add-on SCSI Ctrl for CD ROM, tape backup, optical & removable media
drives
32-bit Burst Mode DRAM 1,2,4,8,16 or 32 Mbyte. Use std 60ns DRAM
SIMMs
Optional autoconfig ROM supports autoboot/hardware configuration
Installs into trap door slot of A1200

**We are easy to find, have friendly
service and easy parking right in front
Shop 9, 2a Surf Road, Cronulla.**

Where will you find us? Just off the Cronulla Arcade
Shop 9 / 2a Surf Road Cronulla NSW
Phone Orders are welcome.

Phone (02) **544 1874**
08 49 3232

Cheesburger BBS (02) 544 1248

Fax (02) 544 1873



LM Ami.ACAR693

You Can CanDo Quick Shots

Greg Abernethy continues his regular guide to using CanDo, an object orientated language for writing your own Amiga applications.

For a change this month I designed three small programs as tutorials. The programs are a Communications program shell, a Printer Utility and a Speech Utility, but due to lack of space the Speech Utility will appear next month. I wanted to see how useful the ParallelManager and SerialManager really were, and also to have some way of finding a suitable voice for some of the educational software I was designing.

The Communications program is simply a way of talking to a modem and receiving information back from the modem. There is no error-checking or attempt to interpret what is being returned from the modem, but I thought it was worthwhile as someone may develop it into a CanDo communications package.

The Printer Utility allows you to select exactly how you want a file to be printed as in ELITE, UNDERLINED, CONDENSED, ITALIC, NLQ or ENLARGED.

Designing the Communications Shell

The specifications for the window are;

```
WINDOW NAME      "QuickComm..."
WINDOW SPECIFICATIONS
X POSITION = 0 : Y POSITION = 0
WIDTH = 640 : HEIGHT = 256
NUMBER OF COLOURS = 4
DRAG-BAR GADGET
WINDOW FRONT-BACK GADGET
WINDOW OPTIONS
THE WINDOW HAS VISIBLE BORDERS TRY TO
OPEN WINDOW ON WORKBENCH
```

```
CARD SPECIFICATIONS
CARD NAME      "Comms"
```

```
BEFOREATTACHMENT SCRIPT
ListenTo "Incoming"
SpeakTo "Serial#0"
IfError
  Dos "run >NIL: <NIL: c:SerialManager -tIncoming
  -pHello"
  Let TimeOut = 50 ; MAX timeout
  Loop
    Delay 0,0,10
    SpeakTo "Serial#0"
    IfError
      Let FoundSerialPort = FALSE
    Else
      Let FoundSerialPort = TRUE
    EndIf
    Let TimeOut = TimeOut - 1
  Until FoundSerialPort OR (TimeOut = 0)
Else
  Let FoundSerialPort = TRUE
EndIf
If FoundSerialPort
  SendMessage "SetConfig F8N12400"
Else
  SetWindowTitle "Major BOO BOO!"
  Quit
EndIf
```

Explanation:

Firstly, make sure you have the SerialManager file in your c: directory. This script sets up our communications ports. The ListenTo port is called Incoming and the SpeakTo port is "Serial#0" which is the default port for sending messages via the Serial Port.

When a message comes from the modem we have an ARExx object called "Incoming" which is used as our receiver for the message. When a message is received the script associated with that object is performed.

If the SerialManager is not already loaded, the script will loop until either the SerialManager is loaded or the script TimesOut, in which case you will see a message in the WindowTitle. The main

reasons for the SerialManager not loading is that the SerialManager file is not in your c: directory or the Serial Port is in use.

If everything is okay, I tell the SerialManager to set its configuration to F8N12400. This is interpreted as FULL DUPLEX, 8 BITS, NO PARITY, 1 STOP BIT and 2400 BAUD RATE. I know very little about modem communications so I can't explain the details except to say that the configuration is standard for most communication programs.

Creating Send and Receive documents

When communicating via a modem, you need some way of sending and receiving messages. I decided to do two documents, one for typing messages to send and one for receiving messages from the modem. The specifications are;

Receive Document Specifications

```
DOCUMENT OBJECT NAME "ReceiveDoc"
DOCUMENT NAME      "Receive"
DOCUMENT TYPE      Memo Document NO TYPING
DOCUMENT ORIGIN    X = 8 : Y = 13
DOCUMENT SIZE      Width = 623 : Height = 120
BORDER Double Bevel
SEND DOCUMENT SPECIFICATIONS
DOCUMENT OBJECT NAME "SendDoc"
DOCUMENT NAME      "Send"
DOCUMENT TYPE      Memo Document
DOCUMENT ORIGIN    X = 8 : Y = 155
DOCUMENT SIZE      Width = 623 : Height = 91
BORDER Double Bevel
NO SCRIPTS
```

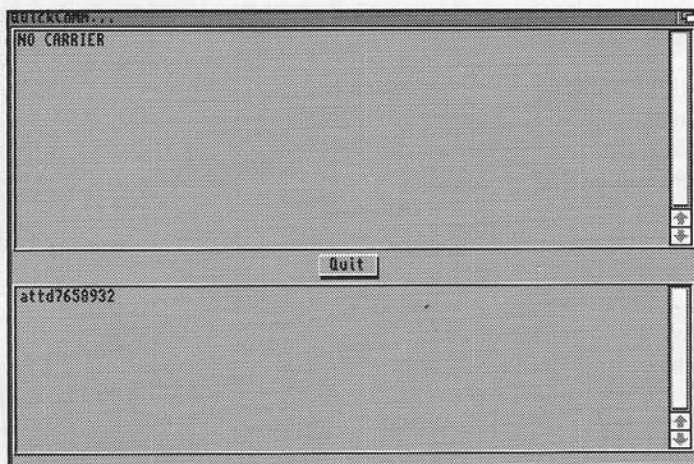
Once the documents are created, the next thing to do is to create the ARExx object for receiving incoming messages from the modem. The specifications for the ARExx object are;

AREXX OBJECT SPECIFICATIONS

```
OBJECT NAME      "Incoming"
MESSAGE TO WAIT FOR "Hello"
Occurred Script
WorkWithDocument "Receive"
Type TheMessage,NEWLINE
```

Explanation:

When a message is received from the modem it is typed into the RECEIVE



Communications program

document. The MESSAGE TO WAIT FOR is "Hello" which is the prefix the SerialManager is using to tell you that it has received a message.

Therefore, when a message is received from the modem, it prefixes the message with "Hello" and the "Incoming" ARexx Object is alerted that a message has arrived. It checks the prefix to see if it is the one it is expecting and then performs the script.

This allows you to have multiple ARexx objects listening for messages. You could apply it to a network with multiple serial ports. Your application would handle the messages coming in and then take the appropriate action.

Next, we need to be able to send messages to the modem. To do this we create a KeyInput object to wait for the RETURN key to be pressed, which indicates that the user has entered a line of text in the Send Document and pressed RETURN.

KEYINPUT OBJECT SPECIFICATIONS

NAME = "SendIt"
 QUALIFIER = NONE
 KEY CODE = RETURN
 RELEASED Script
 WorkWithDocument "Send"
 Let L = TheLine
 NewLine
 SpeakTo "Serial#0"
 SendMessage "Send"||TrimString(L),NORESULTS

Explanation:

Although this script is rather rough, it performs the function of easily being

able to get text messages from a document. When the user presses RETURN instead of the cursor moving to the next line, the KEYINPUT object intercepts the key press and performs the script.

The current line is trimmed of any leading or trailing spaces and then sent to the modem. The NORESULTS option is set otherwise the application will hang waiting for a message from the modem, which will not happen. It is necessary to do a NEWLINE as the KeyInput object has prevented this from happening.

Lastly, we need to be able to leave the program after freeing the Serial Port.

QUIT BUTTON SPECIFICATIONS

Button Name = "Go"
 Horizontal = 287 Vertical = 138
 Border = DOUBLEBEVEL

Button Type = "Text"
 Button Text = "Quit"
 Script
 SpeakTo "Serial#0"
 SendMessage "Send Quit",NORESULTS
 Quit

Explanation:

A message is sent to the SerialManager telling it to shut down, and then the program quits.

This is a very rough application but hopefully someone may use it as a shell for a communications program.

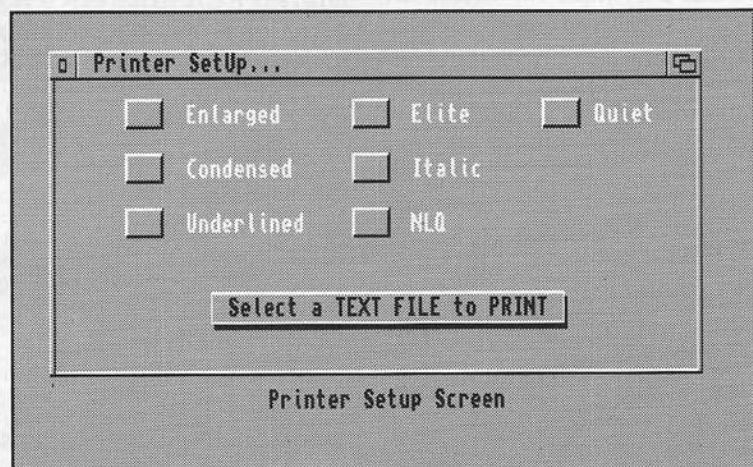
Designing the Printer Utility

The specifications for the window are;

WINDOW NAME "Printer SetUp..."
 WINDOW SPECIFICATIONS
 X POSITION = 100 : Y POSITION = 30
 WIDTH = 440 : HEIGHT = 120
 NUMBER OF COLOURS = 4
 DRAG-BAR GADGET
 WINDOW CLOSE GADGET
 WINDOW FRONT-BACK GADGET

WINDOW OPTIONS
 THE WINDOW HAS VISIBLE BORDERS TRY TO
 OPEN WINDOW ON WORKBENCH
 CARD SPECIFICATIONS
 CARD NAME "Print"
 AFTERATTACHMENT SCRIPT
 SetPen 2
 PrintText "Enlarged",92,20
 PrintText "Condensed",92,40
 PrintText "Underlined",92,60
 PrintText "Elite",244,20
 PrintText "Italic",244,40
 PrintText "NLQ",244,60
 PrintText "Quiet",368,20
 Let enlarged = 0
 Let condensed = 0

Printer Utility



Printer Setup Screen

Let under = 0
 Let elite = 0
 Let italic = 0
 Let NLQ = 0
 Let quiet = 0

Explanation:

When the application loads, text labelling the buttons is printed and the print option variables are all set to zero.

Print Option Buttons Specifications

There are seven option buttons and a print button for this card.

ENLARGED BUTTON SPECIFICATIONS

Button Name = "Enlarged"
 Horizontal = 51 Vertical = 18
 Width = 25 Height = 11
 Border = CHECK
 Button Type = "Area"
 Script
 If enlarged = 0
 Let enlarged = 1
 SetObjectState "Enlarged", ON
 Else

Let enlarged = 0
 SetObjectState "Enlarged", OFF
 EndIf

Explanation:

This script toggles the option on and off, and checks or clears the button.

The Option Buttons are identical with the exception of the Horizontal and Vertical positions and parts of the script. To save space I will give the coordinates for each button.

Also, to change each script simply substitute the name of the variable and name for that button. For example, the Elite Button Script is:

If elite = 0
 Let elite = 1
 SetObjectState "Elite", ON
 Else
 Let elite = 0
 SetObjectState "Elite", OFF
 End

If The Coordinates for each button are;

CONDENSED H = 51 : V = 38

UNDERLINED H = 51 : V = 58
 ELITE H = 204 : V = 18
 ITALIC H = 204 : V = 38
 NLQ H = 204 : V = 58
 QUIET H = 332 : V = 18

PRINT BUTTON SPECIFICATIONS

Button Name = "PrintIt"
 Horizontal = 110 Vertical = 90
 Border = SHADOW
 Button Type = "Text"
 Button Text = "SELECT a TEXT FILE to PRINT"
 Script
 Let File = AskForFileName("sys:", "Select FILE to PRINT....", 150, 35)
 If FileOf(File) = ""
 ExitScript
 Else
 MakeDocument "Work"
 WorkWithDocument "Work"
 LoadDocument File, "Work"
 EndIf

Dos "run >NIL: c:\ParallelManager"
 Delay 0, 1, 0 ; Give the ParallelManager time to LOAD
 SpeakTo "Parallel#0"
 SendMessage "SetByteMode HEX", NORESULTS
 If enlarged = 1

How would you like a 105Mb 3.5" removable hard disk.

The **NEW 3.5" SCSI 2** Syquest removable hard drives are reliable, value for money, easy to install, and very quick. For *security* and *convenience*, for *backup* and *portability* a Syquest drive is the answer. The **NEW SCSI 2** Syquest 3.5" drives are available as external and internal models and take full advantage of the SCSI 2 standards of the new Amiga machines to achieve 4Mb/sec transfer rates. CPA have a limited number units. Call now for more information.

Internal + 1 cartridge \$1399.00
External + 1 cartridge \$1499.00

NEW Quantum SCSI 2
 105 - 550 - 1.2Gig SCSI 2. The fastest and highest quality hard drives available for the power user. • 10Meg per second transfer • Access 9ms • 5Year warranty
 Price on Application.

Tools for Graphics & Video OpalVision

The 24-bit video & graphics solution.



Enhancement Modules

Harlequin32-Bit Framebuffer

As used by Channel 9, Broadcast quality workstation performance. Buffering loads 2 24-bit images at once. 24-bit paint, animation, raytracing, morphing, modelling, single frame record.

iV24 Version 2.0 The serious Video Interface Unit with all addons available NOW.

Digital Edit Master Coming soon

Sunrise AD 516 16 bit Sound cards.

Calcomp Digitising tablet

VLab Frame Grabbers

Pro. Genlocks



Vivid 24

Super high resolution graphics rendering engine. Render 100,000 Gouraud shaded polygons/sec at 160 MFLOPS, 24-bit colour images up to 2048 x 2048. Plus - 8-bit Alpha Channel - Broadcast Quality Video Encoder - 16 MB Video / 8 MB Program Memory. Soon full support for Real 3D Version 2.

EMPLANT

\$799.00

Mac/PC emulator board with optional Mac high speed Serial ports, Apple Talk & SCSI. Full Amiga colour in AGA & 24-bit, plus Multi-tasking. 100% compatible with most Mac and PC Software. 80-85% speed of Quadra!

S-VHS/Betacam A/B roll edit suite tools

CPA Amiga Stop Frame Controller \$1200.00

New Equipment.

Personal TBCII cards • Personal V-scope Waveform Monitors • Sony & NEC Multisync Monitors

NEW JVC, Sony & Panasonic Pro Video editors, cameras & VCRs

Video Hire. Cameras, VCR's, TBC's + **Software, Hardware & Systems**

CPA sells, supports and trains on msot Video Applications and equipment

For the **BEST** prices on

A4000, A1200

and the **NEW**

1942 Multisync Monitors

FREE delivery Australia-wide

CPA Service Specialties

• LOGO Design, • Digitising, • Rendering, • Animation, • Stop frame animation.



Commercial Production of Australia
 P.O. Box 187, Vaucluse NSW 2030

Ph. (02) 337 6255

Fax (02) 337 6255


```

SendMessage "Send 1B 57 01",NOREULTS
Else
  SendMessage "Send 1B 57 00",NOREULTS
EndIf
If condensed = 1
  SendMessage "Send 0F",NOREULTS
Else
  SendMessage "Send 12",NOREULTS
EndIf
If under = 1
  SendMessage "Send 1B 2D 01",NOREULTS
Else
  SendMessage "Send 1B 2D 00",NOREULTS
EndIf
If elite = 1
  SendMessage "Send 1B 4D",NOREULTS
Else
  SendMessage "Send 1B 50",NOREULTS
EndIf
If italic = 1
  SendMessage "Send 1B 34",NOREULTS
Else
  SendMessage "Send 1B 35",NOREULTS
EndIf
If NLQ = 1
  SendMessage "Send 1B 78 01",NOREULTS
Else
  SendMessage "Send 1B 78 00",NOREULTS
EndIf
If quiet = 1

```

```

SendMessage "Send 1B 73 01",NOREULTS
Else
  SendMessage "Send 1B 73 00",NOREULTS
EndIf
SendMessage "SetByteMode CHARACTER",
NOREULTS
Let L = LinesInDocument
If L > 0
  Let x = 0
  Loop
    Let x = x + 1
    PositionOnLine x
    SendMessage "Send"||TheLine,NOREULTS
  Until x = L
EndIf

SendMessage "SetByteMode CHARACTER",
NOREULTS
SendMessage "Quit",NOREULTS

```

Explanation:

Firstly, make sure you have the ParallelManager file in your c: directory.

A requester is used to find the text file to be printed. The file is loaded into the "Work" Document. The ParallelManager is loaded, a delay being used in case it hasn't loaded when

we try to speak to it.

Next, the option variables are checked and if they are ONE, a message is sent to the Printer telling it to set use the option. This is done by setting BYTEMODE to HEXADECIMAL and then sending the HEXADECIMAL printer code for that option. You can add other options, such as Superscript or Subscript, as your printer manual has all the HEX printer codes for various printer options.

When the options have been sent, BYTEMODE is set to CHARACTER and then the document is sent to the printer line by line. Finally, the ParallelManager is shutdown to free up the memory it was using. I have not added the FORM FEED message as it would depend on the application. Test this yourself to see which suits your needs. This utility could be very useful for creating a wordprocessor.

See you next month. ☐

Part 2 next month - the Speech Utility.

Computer Adventure Games - Hints and Tips

The Second Adventurers Realm Hint Book

Detailed clues to over 25 top notch adventure and role playing games

Need help? Want to know how to solve the toughest problems? How to score the most points? Buy this book.

POST, FAX OR PHONE YOUR ORDER

to Saturday Magazine Pty Ltd, 21 Darley Rd, Randwick 2031. Phone (02) 398 5111, Fax (02) 398 5322.

Please send me **Computer Adventure Games - Hints and Tips** (The Second Adventurers Realm Hint Book) for \$10 including postage.

I enclose a cheque or money order for \$10 ☐

OR Please charge my

Bankcard ☐ Visa card ☐ Mastercard ☐

Card No:

Name (print)

Signature

Address

.....Postcode

BIRTHDAY SALE

AMIGA

Amiga 4000/030

2Mb Ram

120 Mb H/D

\$2640

Amiga 4000/040

6 Mb Ram

120 Mb H/D

\$4140

Amiga 1200

Call for this month's
Specials

All 1200 Accessories
available

SHOP 4

Computers

**All Amiga
Software Reduced**

Cnr Burelli & Atchison Sts
Wollongong 2500
Phone (042) 26 2688
Fax (042) 27 3527

Deluxe Paint Tutorial

Floating Baubles

Deluxe Paint guru, Graham Bowden, shows us more uses for the amazing animbrush.

If you missed either of the last couple of *Deluxe Paint* tutorials, now would be a good time to beg, borrow or steal the relevant copy/copies of ACARs past, for the information contained therein will be indispensable in following this month's instructions.

There were a couple of animation tricks mentioned in those articles I didn't have room to explain. Well, times change and space becomes a relatively elastic medium when a new issue of ACAR is being assembled, so we'll continue where we left off.

Animated ...

One of the effects left hanging was a rotating cube with animated sides. Dear and gentle readers, once the technique of cube construction has been conquered, employing an animbrush to assemble an animated animation is a snap (*That'll do - Ed*). Even - or in fact especially - for an amateur animator with an Amiga (*This is your last warning - Ed*). The seed to the secret was planted last month with the orbiting dice where the original rotating dice, picked up as an animbrush, was itself animated.

The fact is that any brush type - Built-in, Custom or Animbrush - can be mobilised using *Deluxe Paint*'s Move requester. With this in mind then, why not form the faces of a cube with conveniently sized animations? Why not indeed, and Figure 1 shows several different animbrushes which were used for just that purpose.

Step by step

Before the cube construction started, a 50 by 50 pixel filled square was drawn to serve as the standard cube face. Then from the Anim menu the number of animation frames was set to 36 before importing the first animbrush which just happened to be the funky dice we created last month. Unfortunately though the very size of this animbrush caused a wee problem. You see the brush as loaded, was too large to fit comfortably into that nominal 50 x 50 pixel cube size. Hhhmmm.

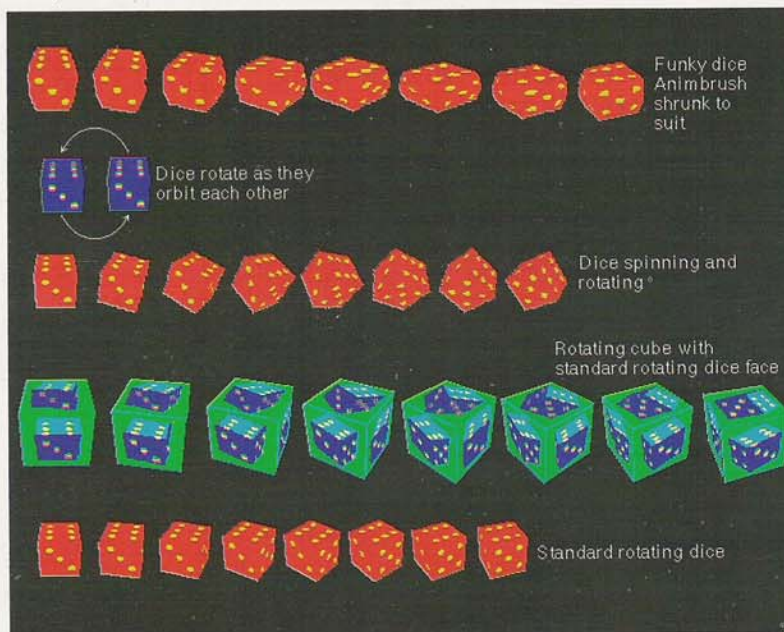
Have you ever tried to shrink an

Animbrush? Both a Built-in or normal custom brush can be shrunk using either the "-" (minus) key or "h" key for small or large increments respectively. Try this with an animbrush however and *DPaint* confronts us with the message "Can't apply this transformation to AnimBrush" which translated means "Nick off, you can't shrink an AnimBrush". And that, dear and delicate *DPainters*, is pure bovine excreta!

It's really quite simple. Enter Perspective mode and position the animbrush directly over Perspective Centre. That's over the cross hairs in the centre of the screen. Start pressing keyboard "'" (apostrophe - adjacent to the Enter key). This has the effect of moving the brush away into the distance - shrinking it. Once the brush is the required size, stamp it down then press <Shift>7 (that's keyboard 7) to return the animbrush to Cel One.

Call up the Move requester, make sure the Dist: and Angle: boxes are all set to zero and the Count: box is set to 36 (remember we have 36 frames of animation set and the animbrush happens to also be 36 cels) then click Draw. Because Perspective is still selected the brush will be drawn down over the frames at its reduced size. It remains

Figure 1



AMIGA 4000



No Problem

Specifications

Microprocessor

A4000/40 - Motorola 68040 at 25Mhz
A4000/30 - Motorola 68EC030 at 25Mhz

Interfaces

One serial & one parallel port
External floppy drive port
Stereo audio output for hi-fi or monitor
RGB monitor / video port
Mouse & joystick game ports
Internal AT IDE Hard Disk interface

Storage

120Mb IDE Hard Drive
1.76Mb/880K High Density Floppy drive
2x3.5" Slimline drives (1 used)
1x5.25" mounting bay

Audio

4 voice, 8 bit digital audio with stereo output

Memory

A4000/40 - 2Mb 32bit Chip/Display ram 2Mb Fast ram expandable 16Mb
A4000/30 - 1Mb 32bit Chip/Display ram 1 Mb Fast ram expandable 16Mb

Workbench v3 featuring

Multitasking v3 Operating System, Compugraphic outline fonts, PostScript Output Support, MSDos 720K/1.44Mb Disk reader, up to 256 colour Workbench Screens

Graphics & Video

Advanced Graphics Architecture (AGA) Chips

New 256 colour screens, new 262,144 Ham8 colour screens from 24 bit palette of 16.8 million colours, resolutions from 300x200 up to 1280x512
15-31KHz scan rates with mode promotion for de-interlacing screens

Supports 15KHz 1084 Monitors & MultiSync monitors

x4 performance increase over ECS chips

New sprite features: 16, 32 or 64 bit wide screen independent pixel resolution

Backward compatible with ECS and original chip sets

Expansion

4 autoconfig Zorro III expansion slots, 3 PC/AT slots in line with Zorro III for use with audio & video digitisers



Commodore

For a supplier near you call

(008) 805 067 (outside Sydney metro area)

or (02) 428 7666

now only to pick up a new, smaller, animbrush. The same sequence can be used to enlarge a brush. Just use the “;” (semicolon) key in place of the apostrophe.

The first animated dice face can now be created by bouncing the funky dice around the 50 x 50 square.

Anim painting ...

The twin revolving dice below the funky dice in Figure 1 are another simple animation effect. The original die we created a couple of months back was a 36 cel brush. With this in mind, load that die as the current animbrush, call up the Spacing requester (Shift-v or right mouse button click over the Vector tool), select “N Total” and enter 72 in the adjacent box. We’re going to use this setting to animpaint a circle.

Animpainting, as with last month’s animfilling routine, involves the use of the left Alt key. Select the “circle” tool, hold down the left Alt key and draw out the circle to the desired size. When the mouse button is released an animated circle will be drawn down over 72 frames (the selected spacing number).

Ah, it’s good to see some of you are on the ball (the cube?) and noticed that

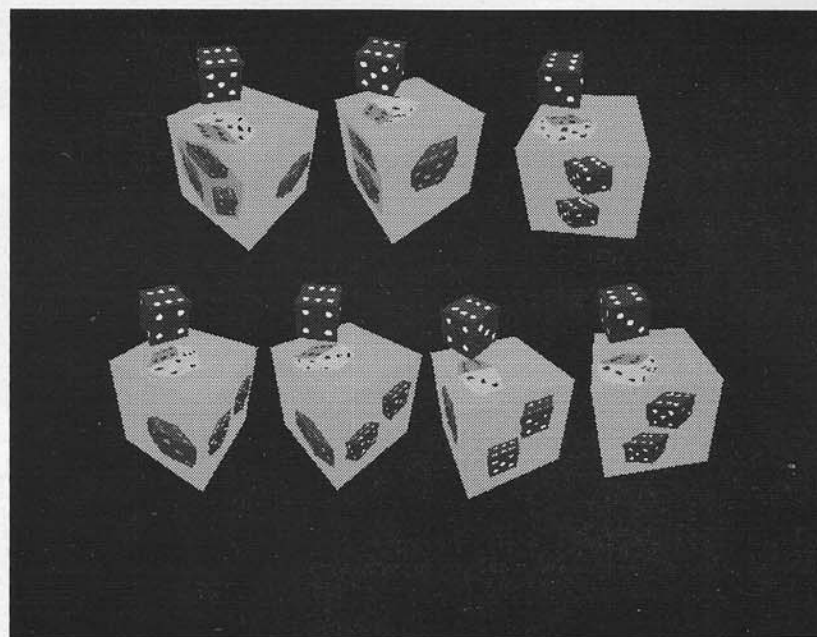


Figure 2

we only have 36 frames of animation. But that you see, is the beauty of it. We end up with a pair of dice rotating about each other and this Gemini set can be picked up as an animbrush, shrunk to the desired size if required and used as the second side of our mobile dice bauble.

The spinning and rotating dice was produced by simply rotating the original dice animbrush through 360 degrees on the “Z” axis with the Cyclic box in the Move requester ticked or if you like, active. Finally the dice in dice animbrush is itself a cube using the standard dice in all its faces.

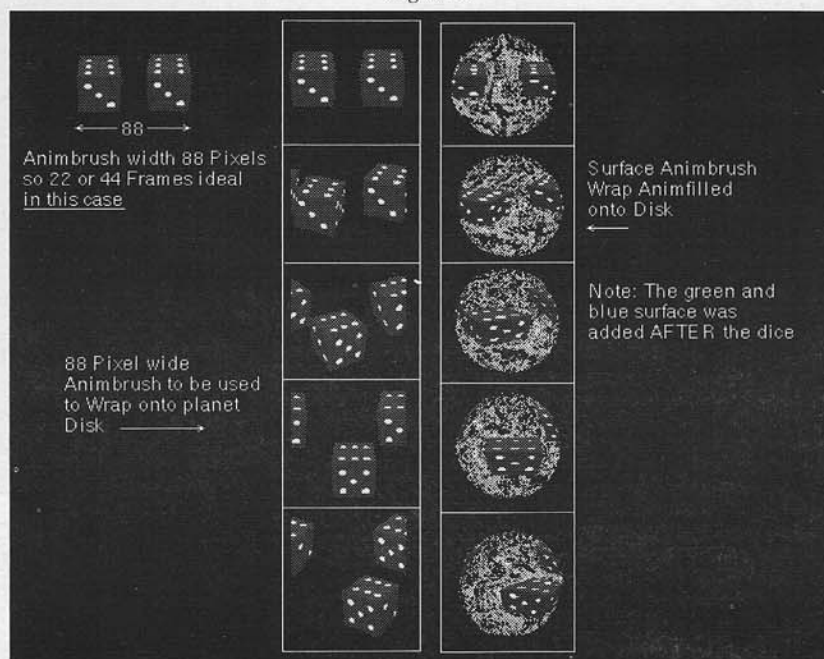
Having thus created the five animbrushes in Figure 1, each one was used within a 50 x 50 pixel square over 36 frames. That left five new animbrushes each 50 x 50 ready to be picked up and used in the construction of an animated rotating cube. Figure 2 has a few selected frames of my um, er, blockbuster. Yes, well.

Double trouble

What of the pair of rotating dice forming the simulated surface of a spinning planet? A mouthful that one, which I shall deal with but briefly this month, as I soon hope to discuss the animating of spinning planets and moons covering even the day/night shadows appearing upon the surfaces. Next month perhaps.

For now, load the double dice animbrush which was constructed using the Animainted circle routine discussed above. Hit Shift-7 to ensure the

Figure 3



brush is currently in Cel One and stamp it down. Use the co-ordinates in the top right of the menu bar to find the width of this brush. For the purposes of this description only, let's say the brush was 88 pixels wide as in Figure 3 and was of 36 Cels duration.

Clear the screen and set up 36 frames of animation, then stamp the brush down somewhere in the middle of frame one. Press Shift-7 to return to Cel One of the animbrush, call up the Move requester and enter 88 into the "X" Dist: box. With 36 in the Count: box click Draw.

When DPaint has finished its activity recall the Move requester, click "Go Back" then select the right hand arrow from under the Direction: Move dialogue and again click Draw. When this is finished press keyboard 4 to view the animation which should in fact be a double double dice animation moving 88 pixels from left to right across the screen. Press the space bar to stop the animation.

Now! Press Shift-1 to return to anim frame one, select Animbrush/Pickup from the Anim menu and carefully box in the two dice on screen, remembering to go far enough above and below them to allow for their orbital movement between frames. When the mouse button is released ensure that the requester which appears is set to 36 and click OK. You now have a new animbrush which can be used to Wrap fill a filled circle.

Clear all frames of the animation, then draw a filled circle about 50mm in diameter. Copy this circle to all frames, then select "Wrap" from the Fill Type requester. Engage the Fill tool and hold down the left Alt key to animfill the circle with your moving, rotating dice animbrush. In my example in Figure 3 the dice also have a background of land and sea over which they appear to move.

impulse
amiga public domain software

We have available the latest Amiga PD at the best prices around. Just a small sample of our large library includes:

- * Fish disks to 880
- * A huge selection of tracker modules
- * WB 2 and 3 utilities
- * Latest Amiga demos
- * Compugraphic and Adobe fonts
- * Plus more we don't have room for...

Order 5 or more disks and pay only \$2.50 per disk; postage and packing is free. Our disks are virus free and come with a guarantee of quality.

Send \$3 for a disk catalogue to the following address or phone (03) 390 8414 (BH) for details.

Disk Magazine Mail Order & PD

MegaDisc

...for the
best in
Amiga info
and entertainment

*NEW FreePost ~ No stamp required
when sending orders! Free Number for
Contributors and Orders: 008 227 418*

*MegaDisc was designed to
help you really learn how to use your
Amiga. Tutorials, articles, reviews, hints and
tips, useful software, and much more are
included to help both the beginner and the
veteran to use the Amiga more productively.
Not too serious and not too lightweight,
MegaDisc aims to show you how to do
things. MD is a proven performer for both
quality and quantity of information and fun.
\$45 for a 3-issue subscription (2 free PD included)
\$69 for a 6-issue subscription (4 free PD
included) • Order MD 1-33 and a
Catalogue-on-Disk for \$185 • AmigaDos
Manual-on-Disk, with all you need to know of
CLI and Workbench (1.3) \$19.95 • Trial Pack ~
MD 33, MegaDos, and Catalogue-Disk for \$29 •
Issue 34 ~ \$17.95.*

*Subscribe now and be in the draw for 30 free PD
disks of your choice! Every MD has the latest
Virus-Killer, and contains as much material as
four conventional magazines, plus material
available only on disk. Don't accept imitations or
PD rip-offs!*

MD 34 AVAILABLE NOW!!

We have the original and best Amiga **Public Domain Disk Library**. Call and get your **FREE Catalogue-on-Disk** and browse at leisure. Our PD collection of over **5500 disks** contains databases, word-processors, spreadsheets, demos, graphics, tutorials, animations, utilities and more! All disks are virus-free, and many are unavailable anywhere else. The disks shown on this page are just a small fraction of our collection, which is described in the catalogue. Individual disks cost \$3.50 each, or \$2.50 to MD subscribers. Buy 10 PD disks, get one free ~ ie get 11 PD disks for \$25 or \$35.

DESKTOP PUBLISHING

4 New Type1/outline fonts 5-packs \$20 each
5 Clip Art 10-packs I - V - b/w, varied \$30
PageStream Fonts 12-Pack - 12 disks full of
Type 1 Postscript Fonts for use in PageStream &
ProPage & WB2 \$35 • **GTS CGFonts** 9-pack -
75 PS fonts for \$36 • **GTS Structured EPS**
ClipArt 3-pack \$12 • **New Bit-mapped Font** 5
pack \$15

GAME PACKS

4 Games MegaPacks of 10 disks each (\$30) with
all the latest and greatest games, easy to use.

NEW!! Education Packs

Young pack - 10 disks crammed with material for
younger users \$30. **Older pack** - secondary \$30.

UTILITIES PACKS

Assembler setup environment 3-pack \$10 •
New HCC C Compiler 3-pack - full setup \$10 •
Home Business 10-pack \$30 • **General Utilities**
10-Pack \$30 • **C Manual** 5-pack \$15 - Complete

C manual • **Workbench** 2.5-pack \$15 • **Icon**
4-pack \$12 • **Comms** 4-pack \$12 - entry into
communications • **New WB2 BestOfFish**
5-pack \$15 • **AGA 5-pack** \$15
Licenceware - CLR, Deja Vu, A/Nuts
We have them all! • We have games, databases,
Assembly compilers, typing tutors & more ~ see
our catalogue for full details.

MEGADISC MAIL ORDER

5% off for subscribers! See Catalogue or MD for full
range • Get free disks with all MD Mail orders, and free
subscriptions for larger orders! • Ask about our range of
printers, modems, GVP h/w, software and more!

Hints & Tips Disk

Complete compilation of all the hints and tips on all past
Megadisks arranged by type, cross-referenced, easy to
use and locate. This covers all aspects of Amiga use and
contains indispensable info. For beginner or veteran.
Price \$19.95 (\$13.95 for MD subscribers).

3 MD Articles Disks

Complete, e.v-to-use compilation of all past MD
articles (MD .30) on 3 disks. Beginner guide and fully
cross-referenced. This 3-pack contains 360 articles! \$15
per disk, \$27 for all 3.

4 MD Reviews Disks - \$24 for all the reviews
on MD - hardware, software and games.

MD Extras disk - Get this with each MD issue
- companion disk with all the PD mentioned or reviewed
on the current MD. Saves hunting around for the PD
mentioned. \$20 for 6 issues, \$12 for 3 issues, or \$5
individually.

Send your subscriptions & orders to:
FREEPOST 80 • MegaDisc • PO Box 759 •
Crows Nest 2065. Or telephone (02) 959 3692 (all
hours) or Fax (02) 959 3525.
Contributions to MegaDisc of any kind are most
welcome ~ please call. We do not charge for
Postage and Packaging, and there are no hidden
extras in our prices. Orders are sent out within 24
hours. We also take BankCard, MasterCard and
Visa Orders by Phone/mail/ Fax.

Cheapest networking for the Amiga anywhere!

PIKit is a hardware/software package which
connects any two Amigas or Amiga to CDTV.
Full access available in both directions - use
both machines fully from either machine. This
greatly expands the power of your Amigas and
CDTV. Only a standard serial cable required
and an external drive. RRP \$29.95.

Nic Wilson Utes

This new package contains the latest versions
of all the utilities which have become famous
in the Amiga world - NoVirus (was \$50),
AddMen (was \$50), AutoCLI, TrackDos,
NoErrors, linfo and many more. Exclusive to
MegaDisc \$29.95.

The C64 Column

by Owen James

1541 Source

Following my comments in the June edition regarding the availability of new 1541 disk drives, a few readers have recently informed me that The Gamesmen may have a few units in stock. For up-to-date information contact The Gamesmen directly on (02) 580 9888 or fax (02) 580 9998.

PD Update

Public domain software can be a great way to source low cost reasonable quality software for your C64. Each month I've been looking at some of the newer titles from Brunswick Publications.

Brunswick Disk #163 - Home Accounts

Home Accounts is a collection of small yet useful programs for calculating household budgets and assisting in making financial decisions. Included is a utility for calculating total interest, duration of debts on credit cards, a name and address database and label printer, a program to assist in the compilation of taxation records and an easy to use calendar maker.

One of the larger and most useful programs on this disk is *Budget V2*. Use this program to enter income and expenses for desired categories to get an overall view of your finances throughout the year, month or week. An income/expense comparison graph can be generated from your data and details can be saved for later recall. Certainly a very worthwhile program, making the

disk attractive for this program alone.

As usual, thanks must go to Brunswick Publications for the continuing supply of public domain software for review. Brunswick tells me they are constantly obtaining new titles from Australia and overseas, so if you haven't seen Brunswick's catalogue for a while, now might be the time to do so. To receive the latest catalogue on disk, send a cheque or money order for \$5.00 to Brunswick Publications, PO Box 458, Bondi Junction NSW 2022. We'll be looking at more of Brunswick's latest titles next month.

MAIL

Repair Dilemma!

Travis Baylis, of Bendigo Vic, writes: "Dear Owen, I am writing to warn C64 users about Excelerator Plus disk drives. Many years ago I bought an Excelerator Plus for my C64. Around 1991 it began acting up. It wasn't loading properly. Some games would load, but most wouldn't. I took it in to be serviced, but was told it was okay. I took it somewhere else, and was told it would be a chip in the computer. But with that replaced, it still wouldn't work, even with a different computer. It must be the disk drive, mustn't it? I can't really afford a new drive.

"The drive is currently being serviced again. When I took it in, I was told nothing could be done, and it hadn't even been looked at! I was told they were too hard to fix, but they'd have a look anyway. Any suggestions?

"I have some other questions to ask:

i) Can the C64 automatically boot a disk when you put it in the drive? Can you program it to autoboot, but keep your program in memory even if the computer is turned off - and just press a key to end the program if you want to use basic?

ii) Can you improve the 64's memory, but cheaply? If not, what are the other prices?

iii) If my drive gets fixed, I've considered getting a copy of *GEOS*. Something that will give me word processors, graphics programs, databases, etc. What programs will give these, and how much are they?"

OJ: The Excelerator Plus drives were for many years a popular and less expensive alternative to the 1541's. Unfortunately, the quality of these units was not consistent. Many have written to me with complaints about them, but just as many have written with nothing but praise. I have personally used an Excelerator Plus for six years, and it has only recently shown signs of wear. And as with all of my computer equipment, it's certainly had a hard working life. Without knowing specific details of the problems, there's not a great deal I can suggest. As with all computer equipment, it's always best to get it serviced by someone that specialises in that type of equipment. If possible, take it to a Commodore Authorised Service Centre (there are several around).

The only practical way to boost the C64's memory these days is with CMD's lineup. As these units are battery backed they will also provide a way of retaining software in 'memory' even after you power-down. They can be used to store software in the same way as a disk, but the advantage being that recall is almost instantaneous. On the downside, however, these units are very expensive, especially when compared to the cost of a new Amiga 600.

GEOS is certainly an excellent choice for productive C64 use. As standard, it includes a powerful word processor with spell-check, a graphics program and a good selection of utilities. There's still a good selection of *GEOS* add-on applications, including a spreadsheet, data-

FREE DELIVERY
to anywhere in Australia

FREE CALL
008 808 503

Amiga 4000 Power Packs

Choice of 030 or 040 processor with the right software and accessories to get the job done. Call for a quote on a package to meet your needs

The Home Office

Amiga 1200 with 40Mb hard drive, Final Copy II, Phasar 4.09 Home Accounting Package, Citizen GSX 230, 24pin colour printer with stand, disks and disk box. All software installed.

Amiga 1200 Budget Pack

Amiga 1200 with 40Mb Hard Drive, Australian Training Video and the new AGA game Overkill. Choice of 3 monitor options or use your TV.

CALL NOW to discuss your system and software requirements.
We have a range of solutions for education, home office, small business and entertainment.

NEW!
Free disk
Catalogue

Amadeus Computers

“Announce One Stop Amiga Solutions!”

NEW!
Free disk
Catalogue

A1200 Expansions

Power PC1204, clock & 4Mb RAM **\$549.00** - with 20 MHz Co-Pro, **\$649.00**
MBX 1200Z, Co-Pro, clock and up to 8Mb RAM from **\$349.00** - MBX 1200ZA, 68030, clock & up to 8 Mb RAM from **\$699.00**
MBX clock module **\$59.00**

Bible Programs

Extensive search functions, speech and built-in wordprocessor with margin notes. Multiple windows to compare verses. Hard disk or floppy. from **\$150.00**

Hand Scanners

Power Computing - quality scanning at an affordable price. Mono with software, (all Amigas) **\$299.00**
Colour with software **\$599.00**
(A2000/3000/4000)

OVERKILL

The first game designed from the ground up for AGA machines only. Arcade action as it should be, in living colour and at an affordable price. Designed and manufactured in Australia. (AGA only) **\$49.00**



CG Fonts Package

Incredible value. 300 CG Fonts, 11 disk set including 40 diskette box. Add variety and interest to your documents. **\$99.00**

SuperBase Professional 4 v1.3

It's here at last, with full AGA support. Too many features to list. Call for more details. **\$299.00**

SuperBase Personal 4

Perfect for storing and retrieving information. AGA version in stock. **\$199.00**

HyperCache

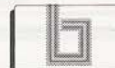
Increase your hard drive data transfer rates by up to 20 times with this simple but effective package. **\$59.00**

Clarity 16 Bit

Incredible value for true 16 Bit Sound Sampler. CD quality from your Amiga. **\$249.00**

HOW TO ORDER

FREE Call: 008 808 503 Sydney **652 2712**
or post to: 34 Tecoma Dr, Glenorie NSW 2157



Rombo Products

Vidi Amiga Real Time will be out soon! Call for updated prices and release date. We are authorised distributors of all Rombo products including the MegaMix Master Sound Sampler.

Personal Paint

AGA support, screen grabber, paint and image processing - easy to understand manual.

\$109.00
Personal Font
Create your own fonts to use with other programs. **\$129.00**

Citizen Printer

GSX - 230 24 Pin Colour at an affordable price with the Citizen guarantee of quality and reliability. 2 year warranty. Including cables and software. **\$599.00**

base, desktop publisher and more. However, *GEOS* works best when used with a mouse, which are unfortunately extremely difficult to get hold of in Australia. *GEOS* is still very usable with a joystick.

GEOS has a recommended retail price of \$79.00, but many retailers are offering it for far less. Code One Computer Services (tel or fax (047) 57 3982) currently has it for \$62.00.

For Sale

Bill Fife of Blacktown NSW writes:

"I'm writing this letter hoping you can put my ad in your C64 column soon. I've had a 64 since about 1985, but for the last ten months I've been using an Amiga, so the software for the 64 is for sale.

"A treasure trove for C64ers! 95 disks starting from 50 cents each, as well as a datasette with head alignment kit and 29 games for \$60.00. Disk games include public domain, printing programs, general games and business software as

well. Please write for a comprehensive list on all of the software. First in, best dressed!

"There's software here that you can't find anymore, so collectors will like it, I'm sure. The software is offered on a sale basis only. I'm not interested in swapping."

OJ: If you're interested, contact Bill directly by writing to 21 Lyton Street, Blacktown NSW 2148.

C64 Software Supply

Kevin Picone, from a group known as 'Underware Design' (very cute, guys), writes:

"Dear Owen, I'm writing to you after reading a letter in the May 1993 issue of *ACAR*. A reader brought up the point that the 64 needs a face lift, which is correct. But he seems to forget that CBM updated the 64 many years ago, which of course was the CBM 128.

"There is no questioning that the CBM 128 was the logical step up from the 64 range of 8-bit machines and was

created, in my opinion, so that the 64 could be phased out. But as we all know, this never happened. The 128 died from a lack of 128 mode software thus not giving those people with 64s enough reason to update. This is similar to the current Amiga 1200 crisis with all those A500/600 users waiting to see how good the 1200 software is before they upgrade. (*What crisis? Commodore can't make enough of them! - Ed.*)

"So what can you do about the lack of software being published for the C64 and 128?"

"a) Buy more software! If everyone bought one game every two months or so this may push retailers into keeping more stock through the greater demand.

"b) Contact companies direct to voice your interest in your machine. This may lead to more of the new games being released for your machine. It can't hurt!

"c) Form or join a PD based user group since there's a lot more strength in numbers. With 9-10 million 64/128s out there in the world you should be

Golden Gate

386sx/25Mhz \$999

486slc/25Mhz incl. 2Mb Ram \$1599

Fastest IBM Bridgeboard for A2000/3000/4000

ATonce-Plus

286/16Mhz IBM AT Emulator

Amiga 2000 and 500 **\$399**

CD-ROM NEC SCSI External \$599

A1200 8Mb ram card \$349

VXL-30 25Mhz 68030 accelerator \$449

A600 1Mb ram card incl clock \$119

240Mb Quantum SCSI harddrive \$649

105Mb 3.5" SCSI-2 Syquest removable HD \$849

Monitor switchbox incl cables \$99

2.5" IDE harddrive call

Phone for our free pricelist on disk

Fonhof Computer Supplies

64 Cross Street, Baulkham Hills NSW 2153

Phone (02) 639 7718 Fax 639 5995



P.O. Box 3072
Weston Creek, A.C.T. 2611
Phone: (06) 288 6946
Fax: (06) 299 1473

**HARGWARE
AMIGA PD**

in association with:



OF THE U.K.

**FISH VIDEO PROD.
DEMOS — UTILITIES
MUSIC — GAMES**

SEND \$2 FOR OUR CATALOGUE DISK

PROUD TO BE A MEMBER OF THE PDAA

able to make someone sit up and take notice.

d) Programmers, use your talents! It's no secret that most 64 coders are or were crackers, so why not give something back after all you've taken. Cross the line and turn a love into a business and start making games.

"It all seems so simple, well on paper at least. I wish you all the best of luck and may the 64 and 128 go on for many years to come."

OJ: Some interesting points there. It was certainly a shame that the 128 died prematurely, but it was just a case of very bad timing. Shortly after the 128 was announced Commodore acquired the Amiga company, and so the spotlight shifted from the 128 and it just didn't receive the promotion it needed.

Regarding the Amiga 1200, there's no question of its continued success. They're selling fast, receiving reasonable promotion, and already there's been quite a stunning amount of productivity, and even more surprising, public

domain software, written to take advantage of its AGA chipset. There's no turning back now; The A500, 2000 and even the 3000 has been dropped from production, leaving the AGA-less A600 (now selling for \$399!), the 1200, 4000 and the yet to be announced 'mystery' machine that will most likely plug the gap between the 1200 and 4000. Development for this new breed of Amigas is now inevitable.

The biggest problem the C64 faces at the moment is a lack of software. Not just the release of new titles, but even the older ones are becoming scarce. Many distributors are now selling the last of their C64 stocks, making it increasingly difficult even for retailers that want to continue offering C64 support.

Wanted: Tatts II - Found: Final Cartridge Manual

N. Vernon of Qld writes:

"Dear Owen, I am writing to you regarding a letter that you printed in the April edition of ACAR from S Mackenzi

of Cooma asking for a copy of the Final Cartridge III manual. If you would like to print my name and address in full and if he hasn't been able to get one I will send him an original copy as when I bought mine I got two.

"Is there anybody out there that has got a working copy of *Tatts II*, which is no longer distributed? Also, a working copy of *The Big One*. The one that I have won't let me enter any draws over 1625. If I try, it just comes up with a full screen of machine language and crashes."

OJ: Anyone that's interested in contacting N. Vernon should write to 21 Cornish Street, Bundamba, Qld 4304.

That wraps up this edition of The C64 Column. As always, I'd love to hear your news, views, questions and comments. Write to me at The C64 Column, PO Box 288, Gladesville NSW 2111. Modem users can once again contact me via Fido Netmail at 3:713/888.999, with thanks to the Sysop of Way Out West BBS, Darren Gibbs. □

COMPUTA MAGIC P/L

**44 PASCOE VALE ROAD
MOONEE PONDS, VIC 3039.**

AMIGA SPECIALISTS

WE KEEP A FULL RANGE OF PRODUCTS FROM COMPANIES SUCH AS

**COMMODORE, DKB, ROMBO, GOLDEN IMAGE,
NEW HORIZONS, GVP, ELECTRONIC DESIGN.
PLUS**

OUR WORKSHOP STAFF HAVE OVER 25 MAN
YEARS OF EXPERIENCE IN REPAIRING
COMPUTERS.
PLUS

WE KEEP A FULL RANGE OF PRODUCTIVITY AND HOME
ENTERTAINMENT AND EDUCATIONAL SOFTWARE, ALL
AT DISCOUNTED PRICES.

WE ALSO KEEP SOME PRODUCTS WHICH ARE
EXCLUSIVE TO COMPUTA MAGIC, AND ARE NOT
AVAILABLE ELSEWHERE.

WE ALSO OFFER UPGRADE SERVICES ON GOLDEN
IMAGE PRODUCTS BOUGHT FROM US.

PHONE: (03) 326 0133 FAX: (03) 370 8352

COMPREPAIR

**44 PASCOE VALE ROAD
MOONEE PONDS, VIC 3039.**

AUSTRALIAN DISTRIBUTORS FOR

GOLDEN IMAGE

HAND SCANNERS, MOUSE, OPTICAL MOUSE, CORDLESS
MOUSE, RAM PRODUCTS, NEW 240 DPI BRUSH MOUSE.

ROMBO

VIDI 12 AMIGA, TAKE 2, MEGAMIX AUDIO DIGITISER,
VIDI 12 REAL TIME, VIDI 24 REAL TIME

COOMBE VALLEY EDUCATIONAL SOFTWARE

REASONING WITH TROLLS, PICTURE FRACTIONS, MATHS
DRAGONS, TIDY THE HOUSE.

DKB SOFTWARE

1202 A1200 COPROCESSOR/RAM/CLOCK
CLOCK A1200 INTERNAL CLOCK MODULE
MEGACHIP THE ORIGINAL 2 MB CHIP RAM
BATTDISK A2000/3000/4000 BATT BACKED 2MB RAM

NEW PRODUCTS WANTED, IF YOU HAVE NO
DISTRIBUTOR FOR YOUR PRODUCT IN AUSTRALIA,
CONTACT US ON

PH. (03) 326 0133 FAX (03) 370 8352
DEALER ENQUIRIES WELCOMED

AMOS Column

Do you like TOME? I hate it. As I promised a while ago, here's how to write better games without it.

A long time ago, the illustrious TOME Extension came onto the market boasting its ability to hold 9000 screens of information in 64k of memory, scroll in eight directions and access any given tile. This seems attractive to the person who splashes out the \$80 odd to use it, but in reality TOME won't make you the all new Bitmap Brother Coding legend.

Now don't get me wrong, TOME is a very powerful extension. It does give the ability to create large maps and scroll them easily on the screen. But the question is how well, and the answer is not very.

When you look at games like the average horizontal shoot 'em' up, the scrolling and movement of the objects are always perfectly smooth. You could stare at it for hours; it looks real. Then take a look at a scrolling TOME screen. It's an eyesore! Jerky, sloppy scrolling and it's definitely not nice to look at.

So what do we do? Remember how I've mentioned the Turbo Extension before? Well that's what we'll use. Please don't think for a moment that this extension will make you the great programmer almighty either. You still have to use your brain and work out a good system of optimising code and making it as short as possible.

Making smooth scrolling in AMOS has changed somewhat since its inception. Because AMOS is just a BASIC, it's still slow. To scroll using the conventional method (copying a large block on the screen, shifting it left, and redrawing a new bar in the black spot), was too slow for the poor little language to handle. So the popular technique was to use hard-

ware scrolling and screen copying. To best illustrate the differences, take a look at the following two examples:

Example 1

In this illustration you can see the following techniques:

1. Setting up a screen twice as long as the viewing area with both halves looking exactly the same.
2. Hardware scrolling the first half out to the left to show the second half.
3. Copying the contents of the second half (the one currently in view) to the first half.
4. Instantly switching the first half back onto the screen into view making it look

as though there was no switch (both the left and right halves look the same).

5. Draw the new graphics on the right hand side and go back to step 2.

Now, there's a problem here depending on the amount of graphics that are written to the screen. The Amiga has to be able to finish drawing everything before the VBL hits the next frame, otherwise the screen will jerk every now and then.

Example 2

Using the Turbo Extension, we define an area to scroll, simply call the command to do the scroll and update the erased graphics that are left behind.

So here comes our program:

```
(0) *****
(0) 'Sausage's NoTOME Map Scroller
(0) *****
(1) Screen Open 0,352,160,16,Lowres
(2) Limit Mouse
(3) Screen Display 0,140,82,320,160
(4) Hide
(5) Flash Off : Curs Off : Cls 0
(6) Get Sprite Palette : No Icon Mask
(7) Global MAP$
(8) MAP
(9) Procedure MAP
(10) MAP$=MAP$+"44444"
(11) MAP$=MAP$+"44444"
(12) MAP$=MAP$+"41114"
(13) MAP$=MAP$+"51115"
(14) MAP$=MAP$+"11111"
```

Figure 1




```

(15) MAP$=MAP$+"11111"
(16) MAP$=MAP$+"41114"
(17) MAP$=MAP$+"43134"
(18) MAP$=MAP$+"43334"
(19) MAP$=MAP$+"34444"
(20) MAP$=MAP$+"43544"
(21) MAP$=MAP$+"44344"
(22) MAP$=MAP$+"44434"
(23) MAP$=MAP$+"44443"
(24) MAP$=MAP$+"44434"
(25) MAP$=MAP$+"42324"
(26) MAP$=MAP$+"53445"
(27) MAP$=MAP$+"34444"
(28) End Proc
(29) Blit Erase 1
(30) Blit Store Left 0,1,0,0 To 352,160,-4
(31) Wait 50
(32) Multi No
(33) Repeat
(34) Multi Blit 1 To 1
(35) Add M,1,0 To 7
(36) If M=7
(37) Add P,1,1 To 90
(38) Paste Icon 320,0,Val(Mid$(MAP$,P,1))
(39) Add P,1,1 To 90
(40) Paste Icon 320,32,Val(Mid$(MAP$,P,1))
(41) Add P,1,1 To 90

```

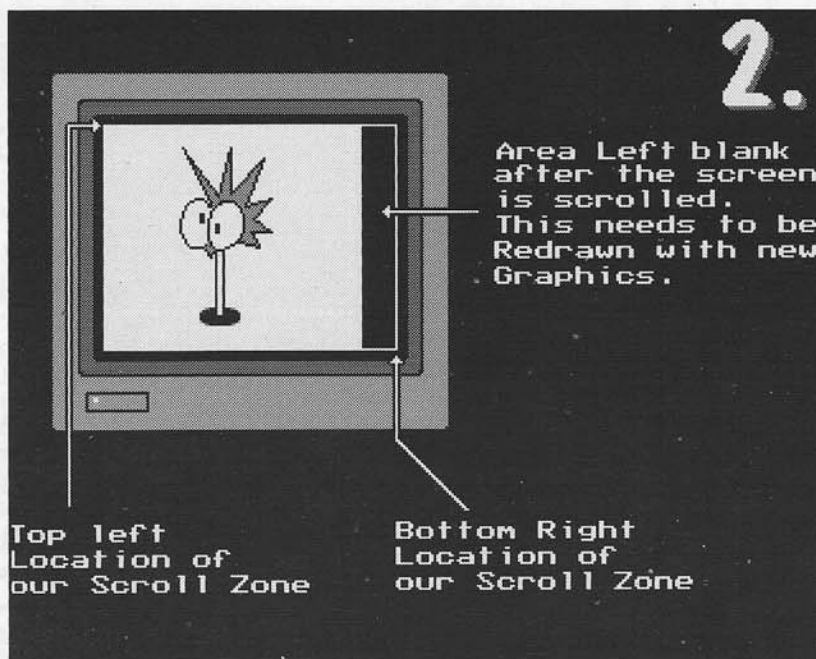


Figure 2

Australian Commodore & Amiga Review back issues still available

JUNE 1992 Vol 9 No 6

● Amiga 600 ● AX RAM Four - A500 memory expansion
● A-570 CD ROM drive ● Answer - Amiga Phone Program
● DPaint - Stencils ● Amiga for Beginners book ● CanDo
- System information Window ● Computer Care - Part IV
C64/128 - Hard Drives, GeoTerm, Joysticks
Games - Castles, Special Forces, Charge of the Light
Brigade, Space Crusade, Home Alone, 4D Sports Driving.

JULY 1992 Vol 9 No 7

● AMOS for the beginner ● Phoenix Colour Digitiser
● Quick and easy video titling ● What the manual doesn't
tell you ● AMOS - Menus ● CanDo - text editor ● Super
Workbench III PD ● C64/128 - Gateway
Games - Titus the Fox, Harlequin, Mega-Pack 2, Baron
Baldric, Legend, SimAnt

Nov 1992 Vol 9 No 11

● Amiga DOS 2.1 and 3.0 ● Artificial Landscape
● DPaint - the right moves ● CanDo - designing databases
● AMOS - AMOS Pro new features
● C64/128 - GeoCanvas, floppy drives
Games - Great Napoleonic Battles, California Games II,
AGE, Epic, Treasures of the Savage Frontier, Tennis Cup II

Dec 1992 Vol 9 No 12

● Opal Vision ● Blizzard Turbo Board Memory
● Video Director ● BBSs ● AMOS Professional
● CanDo - database reports
● C64/128 - C64 to PC, GeoWrite
Games - Myth, Dojo Dan, Liverpool, Crazy Cars II, Hook,
Crime City

JANUARY 1993 Vol 10 No 1

● CanDO V2.0 ● Mini Office ● Hard Disk Standards
● Removeable mass storage ● Amiga Conference
● Display System ● Deluxe Paint Masterpiece
● Pagestream Hotlinks 1.1 ● AMOS - AMAL

● CanDo - AREXX

● C64/128 - Printer Problems, GeoVISION, Modems
Games - Zool, Trudlers, Jaguar XJ220, Aquatic Games,
PD Games, Robosport

MARCH 1993 Vol 10 No 3

● Dirwork and Diskmaster ● Crystal Sound
● AmiBack Vs Quarter Back ● Protracker ● DTP -
Technique & design ● CanDo - A word Scramble game ●
Opal - digital image composition ● C64 - Geos Utilities
Games - Hagar the Horrible, Howzat!, Nigel Mansell's World
Championship, Nick Faldo's Championship Golf, Paperboy
2, Tearaway Thomas

APRIL 1993 Vol 10 No 4

● Word Processing Comparison ● How to Connect Two
Computers ● Getting Started with Scripting - Part II ●
Virtual Reality Today ● Multi Plot XLNe ● CanDo - Pattern
Matching Game ● DTP ● Hot PD ● Amos Column - Dual
Play fields ● Deluxe Paint Tutorial - Hi-res ● Andy's Attic -
Workbench 2 ● C64 - PD Update
Games - Curse of Enchantia, Wing Commander, Shadow of
the Beast III, A-Train, Pinball Dreams, Catch 'Em

MAY 1993 Vol 10 No 5

● Professional Page - Does version 4 of Professional Page
put it in front of Pagestream? ● World of Commodore Show
- Report from New York ● My Amiga 1200 - User report ●
Amiga 1200 Games Compatibility Guide ● Morphing for
Peanuts - the latest in image morphing and special effects
software for the Amiga owner with plenty of RAM ●
Education Column ● You Can CanDo - Make your own
Directory Utility ● Andy's Attic - Exploring WB2 ● Deluxe
Paint Tutorial - Easy Abstracts with Virtual Colours ● C64
Column ● Hot PD
Games - Hook (Full Solution), Lemmings 2, Historyline
1914-1918, Sword of Honour, Best of the Best Champion-
ship Karate, Lethal Weapon, Road Rash

June 1993 Vol 10 No 6

● 3D Animation with Aladdin - Easy for beginners, Aladdin
gives good end results without the long waiting usual with
this type of program ● The Animation Workshop - The
answer to every Amiga animator's dream, Cut, Splice,
Scale, Delay in a mouse click ● New Releases for World of
Commodore Show ● How to Beat those Disk Swapping
Blues ● Deluxe Paint Tutorial - Animating in (apparent) 3D
● Amos Column - Interview with Francois Lionet ● Andy's
Attic - Exploring WB2 ● CanDo - Your own Directory Utility
Part 2 ● Education Column - World Construction Set ●
Down the Opal Mine - Using the Alpha Channel ● C64
Column - Which 128 WP, For Sale ● Hot PD
Games - KGB, Fate - Gates of Dawn, Darkseed, Civilisation,
King's Quest Full Solution Part 1

JULY 1993 Vol 10 No 6

● Real 3D 2.0 - Amiga Animation ● Understanding
Accelerators - Speedy Computing. How an accelerator can
help you ● Dual Personality - Running Ms-Dos Software on
your Amiga 2000/3000/4000 with the Golden Gate 486
● World of Commodore Show Guide ● Microdeal Clarity -
The first of the new cheap 16-bit sound samplers ● Home
Accounts 2 - A user friendly way of balancing your cheque
book and working out your tax ● Deluxe Paint Tutorial -
Animating in (apparent) 3D ● Education Column - Back to
Basics ● Amos Column - The New Turbo Extension V1.75
● You Can CanDo - Your own Directory Utility Part 3
● C64 Column - Tricks and Tips plus gossip ● Andy's Attic
- Buying PD and Readers' problems ● Hot PD
Games - The Chaos Engine, Beavers, SleepWalker,
Vikings, Solutions for SuperFrog and Kings Quest Part 2

\$3 each including postage. Send cheque or phone/fax credit
card number. Saturday Magazine, 21 Darley Rd, Randwick
NSW 2031. Ph (02) 398 5111 Fax (02) 398 5322.

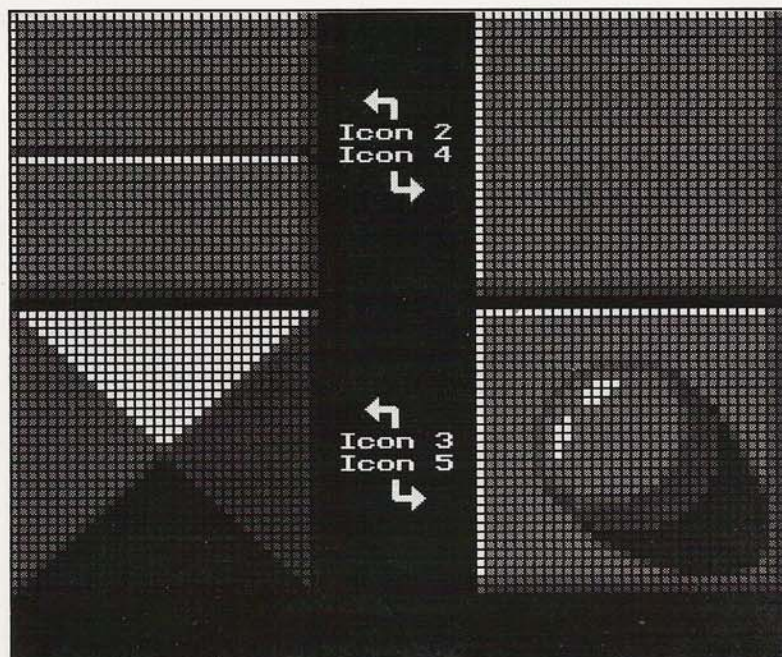


Figure 3 - some blow-ups of my icons

```
(42) Paste Icon 320,64,Val(Mid$(MAP$,P,1))
(43) Add P,1,1 To 90
(44) Paste Icon 320,96,Val(Mid$(MAP$,P,1))
(45) Add P,1,1 To 90
(46) Paste Icon 320,128,Val(Mid$(MAP$,P,1))
(47) End If
(48) Vbl Wait 240
(49) Until Left Click=-1
(50) Multi Yes
(51) Blit Erase 1
(52) Edit
```

What we have above is a simple map

scroll system in 50 lines. You should be able to expand or change it for your own games or demos. Anyway, heres a quick run down of what's happening:

(1) to (7) sets up our screens.

(8) calls our MAP procedure.

(9) to (28) is the actual MAP procedure that holds the map data in a string called MAP\$. I've split the string up in lots of 5. This represents each row of icons to be pasted on the right hand side

of the screen. Each number represents the icon number in the icon bank. Simply change the numbers to display the icons how you want them. Also, make the length as long as you wish. So for a level that's 50 screens long you'll need to do 500 lines. Perhaps I should write an editor!

(29) to (30) erase any Blits that could be in memory and set up a new blit area that covers the width of the screen and about half of the length.

(32) Turns multitasking off so that our program becomes the only thing active in the Amiga and is therefore faster. Be careful with this command. Unless you have used the Until Left Click, and Multi No commands to break the program, you won't be able to stop your program.

(33) to (49) is our main loop that waits till M=7 before drawing the set of five icons down the right hand side of the screen. Experiment with this value for strange effects.

(50) to (52) reset everything and go back to the editor. One last thing, this code has been written to work with five different icon definitions that are 32 x 32 pixels. Fewer colours are faster and better. You may wish to create your own icons for this tutorial, but this time I've included some blow ups of my icons in Figure 3.

Figure 4 will show you the results you should get after entering the program and creating the five icons in figure 3. Remember that Icon 1 is a blank square. To create the icons, use the Sprite Designer



I'm totally wrapped with Mallee Software's service. They post my completed order the day after receiving it, they always use quality guaranteed disks and they're virus free. Check out these packs.

Now I'm off to play one of their 140 playable game demos, if you write or call for a list you can choose any 5 playable demos for \$15.00. Like *Cytron*, *Lemmings 2*, *Dr Who*, *Body Blows*, *Chaos Engine*, *Zool*, *Pinball Fantasies*, *Warlords*, *Alien Breed 2*, *Flashback*, *Desert Strike*, *Lotus 3*, *Woody's World*. But for me it has to be *Cadaver!*

Mastercard, Bankcard, Visa Welcome!

IFF ClipArt Packs \$25.00 each.
We have three ten disk packs of IFF colour and B&W images with more coming soon! Jazz up your

Mallee Software
South Road
Underbool, Vic 3509
Tel: (050) 94 6358.

Meanwhile, beware Wizards bearing gifts!



G'day. Would you like to go on a journey? Just carry this ring awhile!

Arcade #1 \$15.00 MegaBall, Missile Command, Sball, DragonCave, Car, 7Tiles, GridRunner, Rebound, Invaders, Miniblast.	Arcade #2 \$15.00 SlotCars, Sys, Tron, Moonbase, Cat&Mouse, Shark, Cosmo2, Galactic Worm, Ball, Drip, MirrorWars, Steinschlag, Running, SpaceWar, Blizzard, Flaschbier.	Arcade #3 \$15.00 Pacman 87, STBash, Girl Actions, Hemroids, Grav Attack, Eat Mine, HoverTank, Humartia, Triclops Invasion.	Arcade #4 \$15.00 Balloonancy, Bally 3, Super Twintris, Circles Up, Numbers Up, Cosmoroids, Amoeba Invaders, Deluxe Hamburger, Tumbling Tots, Egyptian Run.	Arcade #5 \$15.00 No Man's Land, Puggles, Scum Haters, Wizzy's Quest, Master of the Town.
--	---	---	---	---

Arcade #6 \$15.00 PipeLine, Crazy Sue, Deadline, Peter's Quest 2, Air Ace 2, Llamatron, Desert Storm, Sub Attack.	Arcade #7 \$15.00 Alert, SolidQuad, Skate Tribe, Dynamite Dick, Lamer Game.	Arcade #8 \$15.00 Growth, Yum Yum, WormHole, Serene 1, Serene	Arcade #9 \$15.00 Microbes, Match Patch, Amos, Coindrop, Ball Lightning, Serene 3, Trek, BugBlast, Bull in a China Shop.	Arcade #10 \$15.00 Invaders 2, Parachute Joust, Wastelands, Quadrix, Cars.	Arcade #11 \$15.00 Pod, QBic, Catch 'Em, Maze, Mr Wobbly, TinyBall, Fatal Mission, Defenda, MegTron, Battlements, That Tennis Thing, BugBlaster, MouthMan, Omega Race, DragonTiles.
---	---	---	--	--	---

Arcade #12 \$15.00 Pom Pom Gunner, Flame, Jumpy, XFI, Arazmax, Pong, Tank Attack, Cybernetix, Donkey Kong.	Campaigns #1 \$15.00 Bull Run, Nuke, Metro, King, Kingdom at War, SeaLance, Empire, Imperium Romanum, Jeopard, Emporos, Lore of Conquest.	Text Adventurer \$20.00 7 disks of classic text adventure fun. Golden Fleece, Frustration, World, Adventure, Castle, Labyrinth 2, the Spectrum emulator and 14 Speccie text adventures.	Brain Teaser \$20.00 7 disks, 40 programs of brain testing fun.	COMING SOON R.P.G. HEAVEN. HARD LABOUR. More Arcade & ClipArt packs. WRITE OR CALL FOR LIST!
--	---	---	---	--

and convert them with the Icon_Conv.AMOS program on the AMOS Programs disk or use my converter that was in an earlier issue of the AMOS Column.

Tips for Using NOTOME:

If you find your map jerks now and then, you can try the following:

- Decrease the number of colours used.
- Compile the code to speed up the program and beat the VBL before it starts on a new frame.
- Use one less tile. In our example, I've used 5 32x32 tiles. This is better than 4 45x45 tiles (size of the tiles affects drawing speed). Even having 9 16x16 tiles is faster. If your machine cannot keep up, reduce the program to 4 32x32 tiles.
- Make sure that you only open a screen of the length required to scroll. In other words, don't open a 256 pixel high screen if you only intend to scroll 100 pixels of it. This wastes blitter time.

News and New Stuff

● Yes it's finally here! The AMOSPro Compiler is now starting to hit the shelves, and is certainly no simple facelift from the original. This compiler has been completely redone. Look out for it at a retailer close to you! A demo is also available from the AMOS Club.

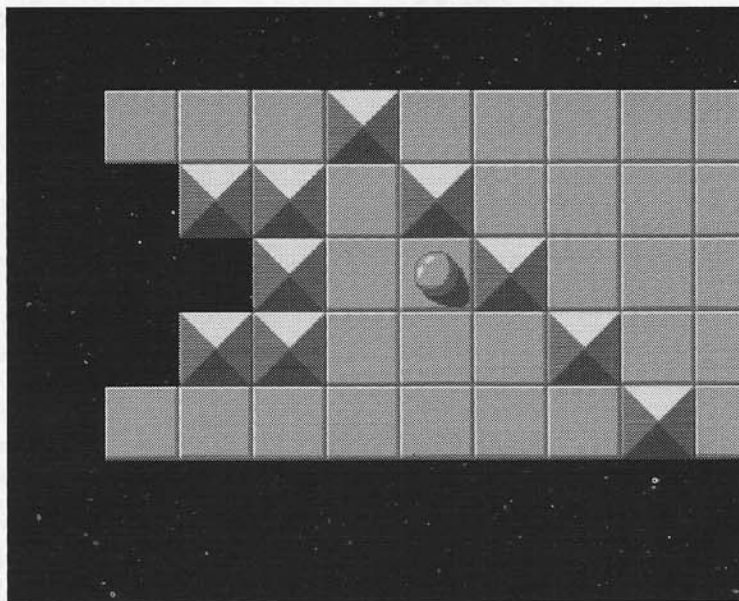


Figure 4 - Results

Ncommand Pro goes Commercial

Ncommand has been around for quite some time now as shareware; but now it has turned into a commercial product. The shareware product has now become redundant and the Deja Vu license to sell Ncommand shareware has expired. It is now illegal for PD clubs to sell the shareware version!

The full commercial product is now being imported exclusively by Public Do-

main Plus. For those who don't know what Ncommand is, it is not an extension but a set of procedures that allow the user to program Workbench 2 and 3 style icons, windows and screens. This does not mean Intuition programming (that's coming in the new AMOSPro update), but it means creating a type of fake Workbench environment on AMOS screens. You can also create requester and dialog boxes. This is a welcome relief to owners of AMOS 1.36 who don't have the Interface Language like AMOSPro owners. □



**OFF THE PLANET
SOFTWARE**



Authorised 17 Bit
Public Domain Dealer

11 The Boom, Port Macquarie, NSW 2444
Phone: (065) 836 994 Fax: (065) 84 1212

Special:

Amiga PD: All Amiga PD \$2.00
Includes 17 Bit, Fish, TBags etc.
We also supply blank disks, disk boxes, joysticks,
peripherals, and all other accessories.
Discount Amiga software available.
Ring for prices and availability.
Send \$3.00 for 2 disk public domain catalogue.

High Speed Data/Fax Modems

V.32bis Int No Fax \$426
V.32bis Int With Fax \$469
V.32bis Ext No Fax \$508
V.32bis Ext With Fax \$549

**All Fax Modems Come With
Software**

**Call PCM Computers
(03) 701 0343**



PO Box 5A
Mt. Kuring-Gai NSW 2080
Phone (02) 457 8111 Fax (02) 457 8739

**Software and
accessories for
Amiga and C64**

Down the Opal Mine

by Robert Roy, Opal Technology

Opal Zap

In this month's column I thought we should check out some of the features of *OpalPaint*'s Zap function. Yes I know it's a bit of a gimmicky name, but we couldn't think of a more traditional, computer-type one. Anyway, if you haven't used it yet you are really missing out on something.

OpalPaint usually works on areas of the image as large as the viewable window. While this window is equivalent to full PAL broadcast resolution (up to 768 x 576 in size), *OpalPaint* is capable of working with images up to 32,000 x 32,000 pixels in size. The question arises: how can I do an operation on the whole image at once without having to scroll around and match up the edges of each operation area?

The answer is the Zap. The Zap function can be simply described as equivalent to a filled rectangle tool dragged out to cover the complete image, not just the viewable window. All other options will work the same, including colour selections, drawing mode, transparency etc. In fact, a good way to develop various image effects is experiment with a smallish filled rectangle (undoing each time) and then Zap the whole image when you have the effect you want.

A better Zap

An important enhancement in V2.0 (and a few of the earlier beta versions of *OpalPaint*) was a major extension of the Zap function. It is now "undoable"

(although if there isn't enough memory for the undo buffer you can still proceed only after a warning). It also works with gradients, stencils and alpha transparency. If you are still using an early version of *OpalPaint* you will probably be limited to a version of the Zap function that works like a SOLID, filled rectangle, i.e. no gradients, no alpha transparency etc. Another good reason to call Opal Tech and arrange an upgrade today.

The Zap can be accessed in several ways. The first is via the Zap button on the Extras Menu Bar or the Amiga-z keyboard shortcut. The percent-finished will tick up in the Feedback area and

shortly the whole image will be changed. The other method is especially useful when image processing. Many drawing modes (again in V2.0) have a Preview button which presents a slider (or two, or three) so you can adjust various image settings while watching the effect of that setting on the image in real time.

For example, using the extremely useful "Balance" loadable mode you can raise or lower the red, green, blue, brilliance, contrast and/or gamma of your image. While you can of course return to the "normal" painting screen and apply your previewed effect to a defined area of the image, all of these "Preview" modes also have a Zap button. This way if you want to retain the effect you have just previewed for the whole image you can "Zap" it and make it permanent. Here are a mixed-bag of nifty Zap effects for you to try. I hope they will trigger other ideas as you use them. Drop us a fax, letter or some e-mail with your ideas and I'll try to include them in a later column. Here goes.

Great Backgrounds

1. Do great smooth linear and radial gradients over large images. Set up the colours, check it out using a filled rectangle, then Zap away.



2. Like the previous one only on steroids. Set up a gradient with lots of transparency transitions that go between transparent and partially opaque (like a sine-wave). Using the specified-angle type of gradient, do multiple Zaps using a different angle, different colours and/or different spacing between the "waves" each time. This should build up beautiful patterns. Half the problem is knowing when to stop.

3. Choose a global transparency (try 50% first) and white paintpot. Using normal Paint mode, Zap to create a washed-out image that's a great background for titles or advertising. Try different colours, different transparency settings and adjusting contrast or brilliance on the "washed" image (again using Zap).

Changing images

4. Zap images using some of the great loadable drawing modes to give a simple scan or frame grab a fine-art or even

surrealistic effect. Some of my favourites are Emboss, Woodcut, Oil-Paint (try different levels) and even Minimize, Maximise and Median. Warning - some of these modes are VERY computationally intensive, or in other words they can take a looong time. Time for a cup of coffee, but the results are worth it. Another good reason to test the effect on a small area before taking the plunge.

5. ChromaCTRL is a topic all its own. You can do some really weird stuff with colour curves (and remember that all the effects can be applied to live video using the Video Processor Module).

Another neat trick is to position your mouse pointer over the slider or colour curve you want, then with the other hand toggle the screen behind the 24-bit image using F10. Move your mouse hand and, hey presto, instant feedback. F10 will get the menu back again.

6. If you're feeling adventurous try the Convolution operator. There isn't

room here to elaborate much, but check out the V2.0 Reference Manual. If you own ADPro try some of the convolution matrices included there, and you can often glean good matrix examples from books about Adobe Photoshop (you know, on the mac).

For More Information

If the above ideas haven't got you bursting to hop into OpalPaint and spend a happy hour or six experimenting, then you're probably comatose. Get those ideas flowing in, and as always please feel free to contact Opal Tech on (02) 899 4322 with any questions or comments. Our fax number is (02) 899 5749. Write to us at PO Box 6565 Baulkham Hills Business Centre, NSW 2153. We are also keen to see your participation on the AmigaNet OpalVision echo at a BBS near you.

Happy fossicking. □

Did we see you at the
World of Commodore?
Stand B.14

July 2nd - 4th 1993

--- CABLES ---

A1200 Dual Hard Drive
Cable for I.D.E. \$49
A600 IDE Cable \$35
Special Cables \$Call

--- ROMS ---

Kickstart 2.0 ROMS \$85
Kickstart 1.3 ROMS \$40

--- DRIVES ---

Rocket Extnd. Drive \$175
Citizen Intl. Drive \$169
ICD IDE Controller \$Call
2.5"IDE Hard Drive \$Call
3.5" Hard Drive \$Call

--- MEMORY ---

1/2 meg A500 Mem \$79
1meg A600 Mem \$179
Memory Chips \$Call

--- BLANK DISKS ---

KAO 3.5" Bulk 50s DSDD \$59
KAO 3.5" Bulk 25s \$59
Black-DS/High Density \$65

--- VIRUS ---

K.D.V. The very Best \$24.95
Small Business A/Cs \$79
Omeros Accounting \$79

--- HARDWARE ---

Harris Hi-Tek absolutely the best
monitor filters \$39.95
BIGFOOT 200 watts of pure
GRUNT power supply \$175
Security Switch on/off \$10

--- NEW RELEASES ---

News-Flash European
Multi disk new! \$49.95

--- LATEST GIZMO'S ---

Monitor Switcher: Switches between
RGM & Flicker fixer to Multisync
monitor \$109.
Multisync to Amiga 23 RGB
[15 (Dense) to 23 way] \$59

A WORLD FIRST? in a A1200

Use your existing 40MB hard disk and add your choice of 40 to 210 MB then you too can run with two 2.5" internally by using our special mini I.D.E. dual hard disk drive cable assembly & instructions

Cable assembly. (tax incl) ... \$49.00

The Monitor Switch Box

Switch from Ami RGB to your Video board! This device is simply Brilliant! It comes with a 23 way Fem. (option A) or with a 15 way male connector as (option B) and a 15 way male connector to one 15 way Fem. connector output to your Multisync monitor. It is supplied with adequate 2 x 500 mm cables HOT NEW item order with your dealer today! (incl tax) **\$109**

KICKBOARD PLUS

Still The Ultimate 3 Rom sharing board, for A500/A600HD/A2000/A25000 & CDTV! Simple & Easy to fit! 12 months warranty 13<->20 either boot Program on the disk supplied with our fine "AUSSIE" product. Available from listed dealers. RRP **\$69.95**

UNITECH ELECTRONICS PTY. LTD

Est 1978 --- A MEMBER OF --- 15 years

AUSTRALIAN AMIGA DEVELOPERS ASSOCIATION

Phone enquiries: (02) 820 3555

MAIL ORDERS: PO Box 137 MINTO NSW 2566

FAX your order: 24 hours (02) 603 8685

B/C - M/C - Visa - M/O - Bank cheques - C.O.D.

Available from the following Reliable dealers:

NSW: AMI-TECH (Cronulla) • BASECOM (Seaford) • BITHRAMERE COMPUTERS (nr Tamworth) • COMPUTER BITS (Armidale) • COMPUTER OUTPOST (Newport) • FIRST AVENUE COMPUTERS (Unanderra) • KORELLA TRADING (Belmont) • GRACE BROS (City store) • THE GAMESMEN (Penshurst) • MALCOLM GRAHAM COMPUTERS (Forster) • ORANA HOME & BUSINESS CENTRE (Dubbo) • SHOP 4 (Wongong) • SIGMACOM (Miranda) • SOLUTIONS RENDERED (Hornsby) QLD: DAYMICK COMPUTERS (Burling Waters) • TAS: ANGUS & ROBERTSON (Hobart) • NT: ?? SA: ?? WA: COMPUTERMAN (Mt Lawley) • HEDLAM COMPUTERS (Leederville) • VIC: COMPUTA MAGIC (Moonie Ponds) • MAXWELL OFFICE EQUIPMENT (Abbotsford) • BRASH'S (Australia-Wide) E & OE. Trade dealer enquiries welcome. Prices subject to change without notice. Dealer prices may vary due to transport freight charges etc.

Videography & Camcorder Review

Every two months - reviews, features and tutorial
articles for the home video maker

July/August issue on sale now \$3.95

Or subscribe - \$23.70 for 6 issues / \$45 for 12 issues

POST OR FAX TO

Saturday Magazine Pty Ltd, 21 Darley Road, Randwick,
NSW 2031 Ph: (02) 398 5111 Fax: (02) 398 5322

Please enrol me for issues subscription to
Australian Videography & Camcorder Review,
commencing with the issue.

First Subscription ☐ Renewal ☐

I enclose a cheque/money order for \$ OR

Charge my Bankcard ☐ Visa card ☐ Mastercard ☐

Number

Expiry date

Name

Address

. Postcode

Signature

Hot PD

Daniel Rutter, usually found on the modem or hunched over his latest pile of Hot PD disks, brings us up to date on the latest in almost FREE software!

Amiga PD, like Amiga software development in general, is starting to get a kick in the pants from the arrival of the new AGA machines. More and more AGA supporting or specific software is showing up, and if a couple of the AGA demos I've seen are anything to go by, the game coders must be leaving smoking footprints on their way to get their hands on the new machines.

What does this mean for the vast majority of users, who don't have a new shiny machine on their desk? Well, the more Amigas get sold the more people will be writing programs, and programs which actually need 256 colours aren't all that thick on the ground.

For most, it's a nice option, but you'll be able to get along with an older machine. We're not going to be smothered in incompatible software just yet, if ever, but the benefits of the coming development boom will make everybody's computing life more interesting.

New Animation (++)

Eric Schwartz has, over the years, become something of an Amiga legend. He it was who created the Juggette animations, not to mention a pile of Aerotoons, which do for fighter planes what Thomas the Tank Engine did for trains.

Recently Eric's been concentrating on more traditional animations - short animated stories in the *Looney Tunes* mould, starring Flip the Frog, an ancient animated character whom Schwartz has reincarnated and endowed with a curvaceous (though furry) girlfriend, Clarisse Cat, and, as is traditional, a wide variety of obstacles between him and her.

The latest Flip animation, *Quality*

Time, requires a whopping FIVE megabytes of RAM - though you'll be pleased to know it doesn't need a hard disk; two floppies are essential, though, and it comes on four disks. Personally, I prefer the Aerotoons to the cringe-provoking innuendo of the Flip animations, but it's a matter of taste - and it's certainly very well done, and is available from all good PD suppliers. *Quality Time* is ShareWare - you have to send Eric whatever you think the animation's worth. Sounds fair to me.

MegaView (HOT +++)

I mentioned *MegaView* a couple of months ago. It's a locally coded combination GIF and IFF graphic viewer, which will also view files as they're downloaded. The current version is v2.40b which has fixed mounds of bugs, though on my heavily configured machine I still managed to make it fail. Not to worry; it works fine for most people, and being able to view pictures

THE KEY TO EASIER HOT PD!

HOT - This program appears on the companion disks available from Prime Artifax

Ease of Use:

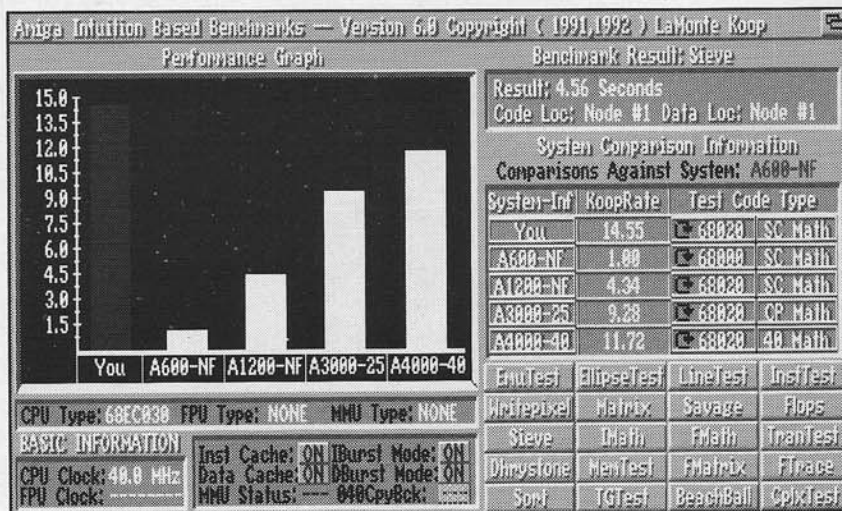
- + Drover's dog could use it
- ++ Basic system knowledge required
- +++ Experienced users - CLI use probably involved
- ++++ Wizards only

as you download them is a great time saver - you can abort downloads of duff pictures nice and quick. *MegaView* now works under WB1.x as well as 2; the current version is 2.40b.

AIBB 6 (HOT ++)

Amiga Intuition Based Benchmarks, the program everybody uses to compare Amiga performance, has hit v6.0, and has been heavily revised. The graphics tests have been completely rewritten to accommodate different screenmodes, and quite a few bugs have been tidied up. The program's a bit smaller, too. Unfortunately, the format of the saved load modules has changed, so those with a library of modules for different machines might want to keep an older version of *AIBB* until they can retest all the machines.

Amiga Intuition Based Benchmarks



Artillerus (HOT +++)

I've got something of a hangup about old style games (no! gasp regular readers), and *Artillery*, the game where two weeny tanks take pot shots at each other on a craggy landscape, is one of the classics. *Artillery*'s been updated on the IBM as *Scorched Earth*, which features assorted mega-weapons to make your opponents' lives brief, but the Amiga has only had the gorgeous but limited *Tanx* and the abysmally coded *Stan's Abysmal Hell*, neither of which have computer opponents.

Well, now there's *Artillerus*, which is a little flaky in its coding and doesn't look nearly as sexy as *Scorch* but features a fair number of weapons, decent computer opponents and fair enough gameplay, although it can be a bit picky about the system you run it on. Try running it from a bare boot with no other programs going. It's no *Scorch*, but it's pretty good, and worth a look.

JiveBunny (HOT ++)

This month I've scared up quite a few Really Stupid Programs. I can't help it, I love the suckers. *JiveBunny* is a nifty little program which generates dance/rap lyrics, which you could actually believe came straight off a record by one of those Italian BOOM-tisha BOOM-tisha musical production lines. It cracked me up.

Unfortunately, *JiveBunny* when run from Workbench opens a window too small to see the text of the song (such as it is). If you've got WB2 you can just resize the window bigger and the text will automatically move to fit; if you're still on WB1.x you'll have to run *JiveBunny* from the CLI.

LEMON (HOT +)

Another Damn Fool Program, this one resembles *WalkingMan*, which I mentioned some months ago, but instead of populating your screen with

little climbing, walking, falling stick men, does it with lemmings. Induces severe double-takes in co-workers. Huge fun, especially when you start torturing the little suckers with *DPaint* ...

DExe (HOT +++)

One for the floppy users - hey, there must be one or two of you out there. *DExe* is a set of two very small programs that do very small simple things; one executes a command whenever a disk is inserted. Both will execute a command when a certain condition is met. With *DExeIn* it is whenever a disk is inserted, while with *DExeOut*, it is whenever a disk is removed.

So you can set up your system to automatically check to see if "disk.script", or whatever, exists on a disk you insert, and to execute it if it does. So when you insert your word processor disk, the program starts automatically, and likewise with your

AUTHORIZED COMMODORE SERVICE COMPUTER

ALL COMMODORE & AMIGA
WARRANTY and
NON-WARRANTY REPAIRS

- * Module Exchange
- * Upgrades & Modifications
- * Workshop Repairs
- * 90 Day Warranty
- * Quick Turn Around

PLEASE CALL FOR CURRENT
PRICES and
LABOUR CHARGES

PARCOM Pty Ltd

Whites Hill Shopping Village
Samuel St, Camp Hill, Qld 4152
(07) 395 2211

Brisbane North Side
5 Clifford St, Stafford Qld 4053
(07) 857 6311

AMIGA PUBLIC DOMAIN SOFTWARE

Over 600 Disks to choose from

NO POSTAGE CHARGES - AUSTRALIA ONLY
(OVERSEAS ORDERS ADD \$10.00)

(Overseas Orders A\$ Only)

DISKS FROM \$2.50

All orders shipped within 24 hours of receipt
Send \$5.00 for 3 DISK CATALOGUE
Catalogue Updated free with Orders

GAMES PACK 1 (WB1.3 Only)

10 DISKS FULL OF GAMES (OVER 50)

PLUS CATALOGUE DISKS \$30.00

GAMES PACK 2 (WB2.0 Only)

10 DISKS FULL OF GAMES (OVER 45)

PLUS CATALOGUE DISKS \$30.00

CMANUAL ON 12 DISKS \$34.95

INCLUDES SIX MANUALS, 40 CHAPTERS, 175 FULLY
EXECUTABLE EXAMPLES COMPLETE WITH SOURCE CODE,
PLUS OTHER GOODIES.

17 BIT, AMOS, FISH, AMAZ, AMICUS, FAUG, NZAUG, TBAG,
AMIGOZ, MUSIC & SOUND, APPLICATIONS, UTILITIES,
ANIMATION, DEMOS, GRAPHICS, SCOPE PLUS OTHERS. WE
ALSO HAVE OUR OWN RANGE OF OVER 600 DISKS ALL
SELFBOOTING AND READY TO USE.

WE NOW STOCK

KDV (Killa Virus) \$24.95

PowerPacker V4.0 \$39.95

PC-TASK \$64.95

Deja Vu Licenceware - CLR Licenceware - AmigaNuts Licenceware

Amiga Public Domain Centre

PO Box 435, St Agnes SA 5097

Phone (08) 396 2163 Fax (08) 263 1393

We Accept Bankcard, Mastercard and Visacard
Money Orders and Cheques

LOTTO SUPERSYSTEMS

Turn the odds your way & WIN!

LOTTO SUPERSYSTEMS is the SMART, CHEAP, EASY way to increase the odds of winning in Lotto games, such as Pools, Tattsлото etc. Playing Systems is the key in turning the odds your way, however regular Lottery Systems are too expensive for the average person to play consistently. Lotto Supersystems cuts the cost of regular system entries, while maintaining the winning edge. It allows you to play much larger and more practical and affordable systems.

PROGRAM FEATURES:

- * Computer Systems
- * Smarter number selection methods
- * User Friendly and Completely mouse driven
- * Quick Picks and Much more

NOTE: For Commodore AMIGA computers only.
(Including unexpanded AMIGA 500)

Please send me LOTTO SUPERSYSTEMS DISK
Send \$25 Cheque or Money Order to:

BIT MASTER SOFTWARE

PO BOX 84

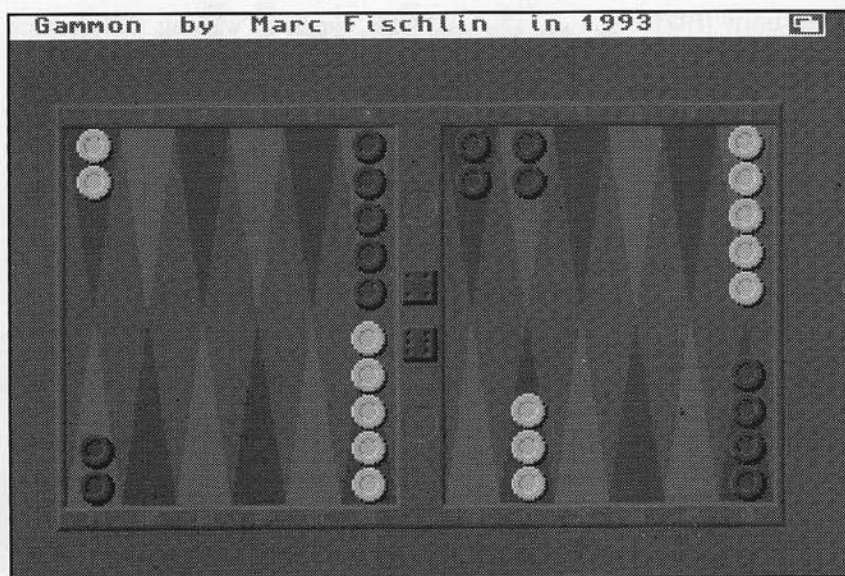
TULLAMARINE Vic 3043

Name

Address

State Post Code

Note: Please Print



Gammon 13

other software. With some elegant AmigaDOS scripting you could turn it into an autoformatter for blank disks, or you could just play the old gulp and belch sounds whenever people insert or remove disks. *Dexe* makes life for floppy users a bit less painful.

InstallerGame (HOT +)

Another stupid program, this one gives you a weeny adventure game that runs on the Commodore Installer utility - which isn't included, by the way, but don't worry, if you don't have it you're not missing much. Installer was never meant to be a game interface, it's meant to install things - such wanton misuse of the operating system deserves applause. Requires WB2.

Titanic Cheats 1.4 (+)

Paul Lawrie has, with his ongoing *Titanic* series, compiled the definitive list of Amiga game hints and cheats. If you get the *Titanic* disk and register it - it's ShareWare but only \$10 Australian, no fancy currency conversions required - you'll have the most up to date and best vetted list of hints and cheats you'll ever find. And, wonder of wonders, it's actually quite easy to find what you're looking for, because everything's kept in small alphabetical files, not the vast monster lists of many other versions. If

you're the kind of low, shameless, completely skill-free scum that wants to cheat at their games (heck, I am), this is the disk for you.

FastCache (HOT +++)

I've recently reviewed the commercial hard disk caching package *HyperCache Professional*, and it's a bit of a bummer for its stockists that *FastCache*, a ShareWare product (rego \$20 Australian, again you don't need US bucks), seems to work better.

Cache software, in a nutshell, accelerates your drives, hard or floppy, at the cost of a chunk of RAM, typically 512k though you can change that. *FastCache* is just as configurable as *HyperCache*, though a quarter of the price. It beats the earlier *SMartDisk* handily, but then *SMartDisk* is PD - free.

You'll notice the most difference if you've got a fast processor and a slow hard drive, but a cache will make a noticeable difference on just about any system, hard or floppy. *FastCache* works well, though it's not for amateurs; *HyperCache* is a little friendlier. We use *FastCache* at the ACAR office.

Gammon (++)

I like backgammon. The skill factor of a board game with the added thrill of, ahem, a friendly little bet. Well, this

computer version doesn't have the monetary incentives, but it could still be a useful primer to build your skills before you venture forth to fleece your friends. The latest version is 1.3, and adds some new computer opponent modes, which have distinct styles of play. It still disagrees with something in my highly configured system, but works fine from any normal setup. Unfortunately, *Gammon* can't be distributed for profit, so finding it's your problem.

Fbl (+++)

Once for the hackers. There have been programs out for ages that accelerate blitter (if you don't know what that is, you don't need to) operations, to make menu browsing, WB updating, text scrolling and similar graphic operations quicker - by about 10% on my machine. Hey, it makes ME excited. *Fbl*, though, is another program you can't make a profit from, so find it on a bulletin board or at a user group.

PC-Task 2.01 (HOT +++)

Local programmer Chris Hames has had considerable success with his *PC-Task* IBM emulator, which is the best software emulator available. Software emulators let you run IBM programs without buying any expensive new hardware - the tradeoff is they're slow. If you have even the vaguest thought about playing a game on a software emulator, abandon it now - if you get the game running at all, you'll have to line it up with a post to see if it moves.

The current version of *PC-Task* features a lot of improvements. The most notable changes are improved mouse emulation, better CGA emulation and speed, and higher MDA speed too. There's some EGA & VGA emulation, though not 256 colour even if you've got an AGA machine. The evaluation version won't save data or print, and doesn't have much of a manual, but it'll give you the idea, and rego is only \$40. *PC-Task* is deservedly popular - it's as much PC as most people need!

Sysinfo (HOT ++)

Another local program, *Sysinfo* is a quick and dirty way to get a look at

C64 SOFTWARE

SPECIAL OFFER - 4 disks packed with programs for the Commodore 64.
Top PD utilities, Games, Word Processors & Disk Catalogue.

4 Disk Pack only \$15

Or write for free catalogue.

For immediate delivery send cheque or money order to:

BRUNSWICK PUBLICATIONS
PO BOX 458
BONDI JUNCTION NSW 2022
Ph (02) 759 7343

Market Place

To advertise here contact

Ken Longshaw on

(02) 817 2509.

This size \$100

MEMORY EXPANSION

PRICES at June 25th 1993

1MB x 1 - 80ns	6.25	SEAGATE 2.5" IDE	
4x256 - 80ns	6.25	64 MB 16ms 32K	210.00
1MBx4 ZIP-70	26.00	85 MB 16ms 64K	360.00
1MBx4 ST COL -70	26.00	128 MB 16ms 64K	525.00
1MBx4 PAGE -70	34.00	209 MB 16ms 64K	790.00
1MBx8 -80	56.00	SEAGATE 3.5" SCSI	
4MBx8 -80	210.00	248 MB 72ms 128K	535.00
4MBx32 -60 -64P	268.00	452 MB 12ms 128K	1280.00
4MBx32 -70 -72P	225.00	MANTEC FLOPPY DRIVES	
PCMCIA V2 - 1M	260.00	SONY 3.5" ext 880K	116.00
PCMCIA V2 -2M	450.00		

Please phone for the latest prices. Sales tax 20%.
Overnight delivery, credit cards welcome.

PELHAM PTY LTD

Tel: (02) 980 6988 Fax: (02) 980 6991
1st floor, 100 Yarrara Rd, Pennant Hills 2120.
PO Box 382, Pennant Hills 2120.

Scarlet Amiga PD Software

PO Box 458
Doveton Vic 3177

(03) 793 3814

Phone for
Catalogue Disk
Open 9am - 10pm

ROD IRVING'S "BULK DISK PRICES" "NO BRAND DISKS"

LIFETIME WARRANTY / BOX OF TEN DISKS
ALL DISKS INCLUDE ENVELOPES & WRITE PROTECTS

	1-9 boxes	10+	50+	100+	500+
5 1/4"DS/DD	\$4.50	\$4.30	\$4.30	\$3.95	\$3.95
5 1/4"DS/HD	\$8.50	\$7.95	\$7.90	\$6.90	\$6.90
3 1/2"DS/DD	\$8.50	\$7.50	\$6.95	\$6.90	\$6.90
3 1/2"DS/HD	\$12.95	\$11.95	\$9.95	\$9.50	\$8.95

ROD IRVING ELECTRONICS

MELBOURNE: 48 A'Beckett St City. Ph: (03) 663 6151
OAKLEIGH: 240C Huntingdale Rd. Oakleigh. Ph: (03) 562 8939
NORTHCOLE: 425 High St. Northcote. Ph: (03) 489 8866
NEW STORE: BOX HILL 1031 Maroondah Hwy. Ph: (03) 899 6033
SYDNEY: 74 Parramatta Rd. Stanmore. Ph: (02) 519 3134
ADELAIDE: 241-243 Wright St Adelaide. Ph: (08) 211 7200
MAIL ORDER: 56 Renner Rd. Clayton. Ph: 008 33 5757
DEALERS: BLUESTAR COMPUTERS:
MELBOURNE: 271 Maroondah Hwy, Ringwood. Ph: (03) 870 1800
SYDNEY: 115-117 Parramatta Rd, Concord. Ph: (02) 744 5426

FREE PACK & POST OVER \$100 & under 5Kg.

Commercial Software
Entertainment titles
AmigaNuts ♦ Deja Vu
PD ♦ Accessories
Digitizers ♦ Scanners
Laser Printing ♦ C64
Big range, Best Prices!



Call for a free catalogue.
Credit Cards Welcome!

PO Box 192,
Katoomba NSW 2780
Tel/Fax (047) 57 3982

The Clip Art Connection

PO Box 112, Hawks Nest NSW 2324
Tel: (049) 971 442 or (018) 490 220
Fax: (049) 971 442

We supply dedicated Clip Art for Amiga users.

All images are single files.

100+ images on every disk.

Hard copy printouts of images available.

Available on 3.5" or 5.25" disks.

Economical - \$4.00 to \$8.00.

Special Discount Offers.

Contact us for Full Details and
Preview Sheets

SOFTWARE FOR CHILDREN

Free Catalogue

Runwell Mail Order
PO Box 920
BURWOOD NSW 2134
(02) 747 2081

Amiganuts



The Best AMIGA
music package
has just become
BETTER!

OctaMED V5.0



OctaMED V5.0 is packed with
new features including, New
Screens, Full On Line Help,
Drop Down Menus and a host
of other extras.

OctaMED V5.0 is only available from
Amiganuts United Australia
P.O. Box 9001, Wilsonton, QLD 4350
Phone (076) 331172 Fax (076) 331172

Send \$4.00 for our 3 Disk PD catalogue

C-64 PUBLIC DOMAIN (SA)

Box 146 GPO ADELAIDE SA 5001
Ph: (08) 294 8447 (After Hours only)

GEOS FILE LIBRARY

14 Double Sided Disks - 800+ PD Files

\$50 incl. postage

Sampler Disk & Listing \$5

GEOS LABELMAKERS

Print your own labels under Geos \$5

GEOS PHOTO ACCESSORIES

Makes Albums/Scraps more useable \$5

USA GAMES PAK (Non GEOS)

Super Mario 1 & 2 (C64 Versions)

Tetris Clone, Arcade Classics,

Crocodile Down Under, Skate Crazy, etc.

70 Games on 4 Doublesided disks

\$25 per Pak Post Paid

Credit Cards Accepted - Stamped Envelope for details

CARADOC ENTERPRISES

For the best and latest in
**AMIGA P.D. software and
GRAPHICS PRINTING**

Huge range of P.D. and ShareWare.

Laser-quality colour printing of

any mode of Amiga graphics.

For our free catalogue disk, send a blank disk to:

PO Box 345 Nanango Qld 4615

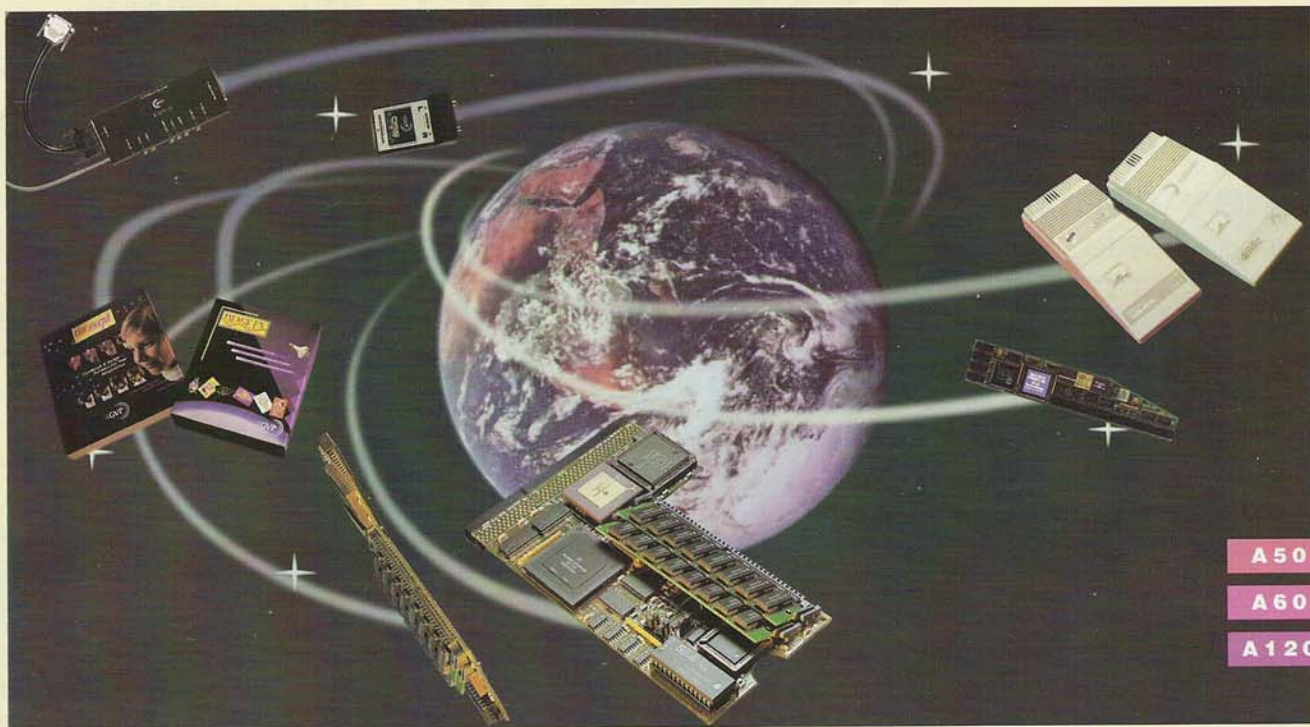
Ph: (071) 633 047 Fax: (071) 633 048

Mob: 018 795 357

9am-9pm seven days.

BankCard/Mastercard/Visa/Cheque/M.O.

SYSINFO V3.22 An Amiga System Information Program Written in Assembler Nic Wilson Software P.O. Box 1164 Toowoomba Qld 4350 Australia										
SYSTEM SOFTWARE INSTALLED				LIBRARIES		INTERNAL HARDWARE MODES				
kickstart	(512K)	S00F00000	V37.175			Clock	CLOCK FOUND			
utility	FAST	RAM S00200154	V37.3			DMA/Gfx	ECS AGNUS - 1Meg			
graphics	FAST	RAM S00203A28	V37.35			Mode	PAL			
keymap	FAST	RAM S00206618	V37.2			Display	STD DENISE			
layers	FAST	RAM S00207A08	V37.7			CPU/MHz	68030 42.70			
intuition	FAST	RAM S00207F2C	V37.318			FPU	NONE			
dos	FAST	RAM S00210B08	V37.44			MMU	68030 (NOT IN USE)			
						VBR	S00000000			
						Comment	Snell the Rubber?			
						Horiz	KHz 15.60			
						EClock	Hz 789379			
						Ramsey rev	N/A	ICache ON		
						Gary rev	N/A	DCache OFF		
						Card Slot	N/A	IBurst OFF		
						Vert	Hz 50	DBurst OFF		
						Supply	Hz 50	CBack N/A		
						ICache		IBurst		ICache
						DCache		DBurst		ALL
SPEED COMPARISONS				EXPAND		C		D		DATA
Dhrystones 68040				You						
A600 68000 7MHz				11.43						
B2000 68000 7MHz				8.65						
A1200 EC020 14MHz				4.96						
A2500 68020 14MHz				2.94						
A3000 68030 25MHz				1.30						
A4000 68040 25MHz				0.33						
CPU				Mips		QUIT				
FPU				MFlops		MEMORY				
Chip Speed vs A600				1.89		BOARDS				
						DRIVES				
						SPEED				
						PRINT				



A 500

A 600

A 1200

EXPAND YOUR HORIZONS

With the world's largest family of GVP productivity-enhancing peripherals for Amiga® 500, 600 and 1200 computers

INTRODUCING The A1200 SCSI/RAM+™ and A1230 TURBO+™

Take full advantage of the Amiga 1200 with these powerful new additions to the GVP line.

A1230 TURBO+

Stepped-up payload—down-to-earth price

- 40MHz 68EC030 processor.
- 1MB 32-bit 60ns RAM, incrementally expandable to 32MB.
- FPU socket for optional 40 MHz math coprocessor (for intensive floating-point operations like animation).
- GVP's exclusive Kickstart Remapping Technology copies Kickstart ROM into Fast RAM for accelerated performance.
- Fits in "trap-door" slot for easy installation. Maintains A1200 warranty.

A1200 SCSI/RAM+

Economical SCSI workstation versatility

- Includes high-speed DMA SCSI Hard Disk Controller. Attach up to 7 other external SCSI peripherals.
- 1MB standard with onboard 32-bit, 60ns, 0 wait-state RAM expansion, (expandable to 8MB).
- FPU socket for optional math coprocessor.

A530 Turbo™ Turbo-charged A500 Enhancer

- Amiga World called it "the best A500 Expansion Box ever." Turbo's 68EC030 40MHz CPU powers your most intensive applications more than 10 times faster, for A3000-surpassing performance.
- High-speed DMA SCSI hard disk controller with internal hard disk.
- Access up to 8MB of 32-bit RAM.
- Unique mini-slot for further expandability
- Instant expandability for up to 7 SCSI devices
- 68882 FPU socket.

A500-HD8+™ Classic A500 Enhancer

- Value-packed with many A530-Turbo features.
- Up to 8MB fast RAM expansion.
- High-speed DMA SCSI hard disk controller with internal hard disk.
- Instant expandability for up to 7 SCSI devices.
- Unique mini-slot for further expandability.

GVP/PC286™ A500 PC/286 Emulator

- Fits in the mini-slot of the A530 Turbo or A500HD8+ to emulate a "286-16" PC. MS-DOS/Windows compatible.

- 512K dedicated PC memory + Amiga memory sharing, CGA-VGA mono display emulation, 80C287 FPU socket.

Great values for the entire Amiga line

G-Lock™

- The industry's most versatile and well-engineered genlock board for professional titling and graphic applications.
- Powerful, intuitive software interfaces.
- Video and audio special effects.

DSS8™

- Record, edit and compose digital audio samples in real time for multimedia audio mixes.
- MIDI-in capability with direct interface between sequencer and editor.
- Graphic editing and composition of wave forms.
- Dozens of effects and features make this the most comprehensive 8-bit Amiga digital audio device.

CineMorph™ Morphing Special Effects Software

- Powerful enough for professional morph results, but easy enough for novice use.

- Generate "composites" aging or missing person simulations.
- Integrated, Amiga-style interface compatible with any Amiga, DCTV™ or HAM-E™ system.

ImageFX™

Image Compositing Software

- Digital retouching with the most complete set of filters, color gradients, image distortions, masks, and text handling tools on the market.
- Converts your Amiga into an image prepress/color correction system with CMYK, RGB, HSV, and YUV.
- Scan in or framegrab from virtually any image capturing device.
- Includes CineMorph features, at no extra charge.

When it comes to a sheer range of innovative products, uncompromising excellence and comprehensive customer support—one company consistently outperforms the rest. World-class performance—it's what you expect from the world's #1 Amiga peripherals company.

A1230 TURBO+™

A1200 SCSI/RAM+™

A530 Turbo™

A500-HD8+™

GVP/PC286™

DSS8™

CineMorph™

ImageFX™

1200 SCSI RAM
4MB, 33MHZ 68882 \$999
Cinemorph \$149



P O W E R
PERIPHERALS PTY LTD

1st Floor, 257 Hawthorn Road
Caulfield North, 3161
Telephone: (03) 532 8553
Facsimile: (03) 532 8556

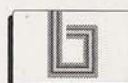
Distributed In Australia By



879 7455
Sydney Metro
 Support • Orders

PR1ME

A R T I F A X



We guarantee
Satisfaction! *PLUS*
 our amazing no fuss,
 no questions asked,
 replacement policy.

NEW June '93 Game Cheat List Disk - NOW AVAILABLE

MOBILE!

Destination Unknown by SPACEBALLS

Another amazing demo by the SPACEBALLS crew. This time it's a little shorter - but the 3D animation is top class. Another one of a kind - A1200 and A3000 compatible. (ONE DISK)

NEW

Music Tracks Packs 1 & 2

Ten disks in each pack filled with some of the best ever Amiga sound tracks in .MOD format. These tracks are ready to play using the included IntuiTracker program or use them in Scala for multimedia. You can also load them into MED, ProTracker or any other tracker, play them or use the instruments to create your own music. 10 disks in each pack for \$29.95ea

SAVE!!

AGA Utils 1 For A1200/4000's

Workbench 3.x utilities: New AGA anim players, picture showers and more all packed onto one disk, ready to run or install. Includes:- GIFDataType, KillAGA, PPSHOW, WBVerlauf, PKludge, FastGIF, AGATest, Degradar, ForceMonitor, Promotor, SetNewLook, AmigaToNTSC, CycleToMenu, BBlank and VT. (ONE DISK)

SHIPPING

Term 3.3

Workbench 2.x users with a hard drive - this is the best FREEWARE terminal program on the market. Term has an excellent interface, powerful script language and phone-book support. ('030 Version Included) Installation Script Included. Three disks. Modem & WB 2.x required. Hard Disk Recommended.

Hard Disk Utilities #1

Includes Hard Disk Backup program, ALock security, File Undelete, Azap disk editor, Bformat - automatically marks bad sectors out of use, Boot Logo, FindIt - locates files fast and HDMem - a Virtual Memory system. 1 Disk.

AGA Demos 1 For A1200's

They've started! Here's the first two true AGA hacker demos to amaze your friends with. Includes a new AGA based Amiga Boing demo plus the Hacker demo HOIS-AGA - with dissolves between AGA images. (ONE DISK)

NEW

Ask for our FREE

**Catalogue Disk
 with the easy to
 use Hyperbook
 Interface.**

NEW

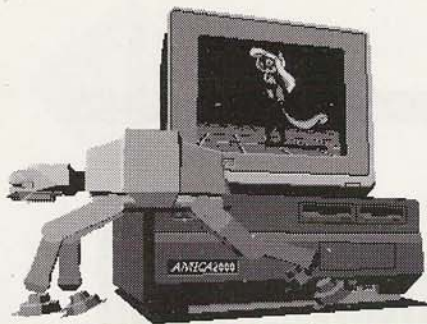
Anti-Virus PAK

Make sure your disk collection is protected against Virus programs. Ensure you're prepared for the day you get a disk which is infected! On disk is BOOTX 5.3A, the most powerful software available on the Amiga today for detecting & removing Viruses. 1 Disk

DTP Enhancer

Five disks in total, including three disks of FONTS, one disk of Structured CLIP-ART, and one disk of New Drivers and Utilities. (Material sourced direct from U.S.A.) Separate version for owners of Pagestream or Professional Page (please state when ordering)

Our disks are unique, compiled, tested & updated by us!



ALL Disks \$5

(Buy more than 1 and SAVE!
See disk prices below)

Support • Service • Range



008 252 879
ORDER HOTLINE
Outside Sydney Metro

Looking for something out of the ordinary? Ask us first - we'll track it down for you.

Business or Home Office?

TRY one of the following disks - compiled by us and ready to run.

Wordprocessing

Finance

Database

Spreadsheets

CAD

Home Helpers

Desktop Publishing

and more...

(ask for a FREE catalogue)

PASCAL

A two disk compilation of Public Domain PASCAL software. Includes the PCQ compiler, A68K, Blink, Debugger, Mon, Examples and PCQ source. (TWO DISKS)

BOWLING

The Silicon Secretary is just for you - keep track of your bowling league scores and much more. Requires 1Mb of RAM. (ONE DISK)

Genealogy II

On this disk you'll find a fully working genealogy database program, ArJay, which allows you to attach free form notes and pictures to each family and individual record. The program interface is easy to use and well written documentation is included. Up to 1000 people may be entered. The Amigaworld database is also on this disk.

(ONE DISK, 1Mb recommended)

DISK PRICES

All our disks are covered by one pricing schedule. All prices includes postage, packing and support.

Disks	Total Price	Cost/Disk
1	\$ 5.00	\$ 5.00
2	\$ 9.50	\$ 4.75
3	\$13.50	\$ 4.50
4	\$17.00	\$ 4.25
5	\$20.50	\$ 4.10
6	\$24.00	\$ 4.00

(for orders of 6 or more disks, each additional disk is \$3.75)

We use quality Memorex Brand diskettes.

Disks of the Month

How can you guarantee a constant supply of quality, low cost software? Easy!

Subscribe to our New Disks of the Month offer, and we will send you a fresh selection of the best new programs for the month automatically. You'll receive one or two disks at a cost of \$6/disk, and we won't bill you until your disks are despatched! CREDIT card orders only.

PD Starter Pack

7 top Disks

Special Price \$21.00

The ideal way for first time public domain software buyers to start building a useful library of good software. This pack is a collection of our most popular easy to use titles.

- Hot Games 1 • Anti-Virus Pack • Finance • Sound-Vision Demo • Cartoon Animations 3 • Tracks 1 • Hot Games 4



Accredited Library
Guaranteed satisfaction or your money back.

ORDER FORM - Post to Prime Artifex, P.O. Box 288, Gladesville 2111

August ACAR

Name

Address

Post Code

Day Phone

Card No.

Valid To \ Visa ☐ B/C ☐ M/C ☐ COD ☐ Cheque ☐

Signature

Public Domain Disks

.....
.....
.....
.....

Please bill me each month for your NEW disk/s of the month offer : ☐

Phil Campbell's Amiga Entertainment

Good news on Amiga games market at last!

There are signs that the drought in the Amiga games market is finally breaking. As Amiga gamers will have noticed, over the last few months there's been a definite lack of new games - but now, according to Commodore PR Guru Howard Needleman, the tide is about to change. Howard has been checking out the world Amiga scene over the past few weeks, and he's right up to date with the latest trends - next month, we'll bring you details of the games you can expect to see in the near future.

A1200 Zool

Meanwhile, in another neck of the woods, EA's Robyn Tunsted reports steady sales of the new A1200 version of *Zool*. Though not setting any sales records, Robyn agrees that sales are healthy for a title limited to a new machine like the A1200. A good sign for the future!

Hot Point Software takes off

After some delays, Hot Point Software is now off and running. Official reasons for the delay include the fact that the original software order from Brash's was unexpectedly huge - and

more importantly, that Managing Director Kevin Davies was busy becoming a dad. Congratulations Kevin! Together with the \$99 software packs previously mentioned here in ACAR, Hot Point are now official distributors of titles from around 18 international software houses. New titles include *Body Blows*, *Super Frog*, *Vikings*, *A320 Airbus*, *Arabian Nights*, *Trolls*, and *Valhalla*. This is great news for the Amiga - we'll keep you up to date with full reviews! For more information, phone Kevin Davies on (02) 428 7791.

ACAR Hints and Tips Disk

After our huge ACAR Hints Disk sellout at the World of Commodore Show, it may well be that everyone in the known world already has a copy. But if you're the last remaining person without ACAR Hints Disk 1 and 2, why not act now?

The disks are packed full of hints, tips and solutions for hundreds of games - so if you're stuck in your favourite game, there's almost sure to be an answer. Just send a blank disk, a cheque for \$5.00, and a stamped self addressed envelope to Phil Campbell, PO Box 23 Maclean NSW 2463. If you're ordering both disks, send just \$9.00 - that's right, a huge 10% discount!

Entertainment Letters

Send your entertainment news, views, and clues to Entertainment Mailbox, PO Box 23 Maclean NSW 2463. Keep your letters brief, to the point - and on the subject!

Caught in Captive

Dear Phil, I'm stuck in the game *Captive* - any help in getting through Mission 2 would be greatly appreciated. I have explored as much as possible and yet have unsolved codes, and an extensive unmapped area to complete. Also, I'd love any help I can get on *BattleTech*.

Dr S D A Demilio, O'Connor ACT

Ed: Stay tuned Doc, and we'll see if anyone can prescribe something for your problems.

Finest Hour Found!

Dear Phil, In reading the May issue of ACAR I came across a letter in your Entertainment Section from Phil Body from Albury NSW. He was looking for *Their Finest Hour* and when I searched through my games I found it - still in the original box with instructions. If Phil wants to buy or swap this game I am willing to co-operate.

Jordan Telfer
40 Elanaru Rd, Elanura Ht's
Sydney NSW, 2101

Ed: Hope you're reading this Phil - if so, get in touch with Jordan at the address above.

AMOS Games Available

Dear Phil, If anyone would like to have a look at some AMOS games, please write to the address below for information about our DEMO disk which shows all our games. Armour

Software, 55 Waitara Grove, Norlane, Geelong, Vic 3214.

Ed: Okay - done. Hope you get a good response. Feel free to send us a copy of your disk here at ACAR and we'll take a look too.

Aussie Rules Fanatic

Dear Phil, I've owned an Amiga 500 for five years now and have seen or played many sports simulations. Of the sports sims, I enjoy playing Australian oriented games the most, especially cricket and rugby. But what I'm really after is an Australian Rules Football Simulation. Is there any such animal out there? Perhaps there's an AMOS wizard who might have already programmed something like this. I think there'd be a huge demand for an Aussie Rules computer game, especially in the southern states.

**Stuart McKenzie
Hoppers Crossing Vic**

Ed: Um, excuse me Stu, but what's this Australian Rules Football stuff? Never heard of it. (Hey, don't panic - I was only joking!) Seriously, though, it sounds like a top idea. I wonder why nobody thought of it before? Maybe you should drop a line to Armour Software (see address above) and see what they can do!

A Frustrating Situation!

Dear Phil, I recently purchased *Leisure Suit Larry 2*. As I always do before running a program, I back up a copy of each disk. After spending many hours playing this game, I loaded disk four, only to discover that somehow I have formatted it blank! No problem, I thought - I'll get my backup. With only around 20 minutes of game left to play, I find my backup has a read/write error. This has left me feeling VERY frustrated. Can someone help me to obtain disk 4?

**Andrew Lord
13 Rainsford Tce
Campbellfield Vic 3061**

Ed: Gee, Andrew, you sure know how to paint yourself into a corner! Maybe there's a kind reader out there who could send you a copy of Disk 4 - let's hope so!

Hall of Fame

I received three high scores this month which is a bit better than last month. James Browning blitzed the previous high score for PORTS OF CALL on the Amiga, Charles Smith clocked up a few more confirmed kills for WINGS also on the Amiga and our own Andrew Gormly placed his name again into the illustrious HALL OF FAME tables with a score for Rick Dangerous II. Thanks fellas. How about the girls send in some scores as well?

Please note, during the next few months we'll be pruning the Hall of Fame a little, so if your name's been appearing for years and you're just sitting back taking it easy - it's curtains.

Must be off, but before I go, I must comment on the state of the waves in Yamba. Totally brilliant, man! But to the tourists, stay away from the best surfing spot in Australia, Lovers Point. See ya later.

Send your high scores to Juris Graney, 41 Cameron St, Maclean, NSW, 2463. Please mark clearly whether your scores are for C64 or Amiga. And remember - **No cheat modes allowed!**

AMIGA

ACTION FIGHTER 132,530
Robbie Baker
ALERT 359,700 Robbie Baker
ARKANOID 1,052,610 S Walter
AMAZED 130,500 C Turnadge
ANARCHY 646,560 Sid Vicious
AQUATIC GAMES 4,170,666 - Phil Cary
AXEL'S MAGIC HAMMER
329,800 Aaron Buscumb
BAAL 134,250 Davo
BARBARIAN II 100% Sid Vicious
BATTLE COMMAND 334,200 Peter Cain
BATTLE SQUADRON
99,999,999 (c) Amos Burbidge
BEYOND ICE PAL 67,626 (c) Chris Turnadge
BIO CHALLENGE 29,000 A Sanderson
BLOCKOUT 85,281 S Lark
BLUES BROTHERS (C) LOOPY
BOMB JACK 468,120 K Butters
BUBBLE + 276,850 (c) C Toyne
BUBBLE BOBBLE 2,960,980 Kristy Cameron
BUDOKAN 6:08min M Sorensen
BUGGY BOY 113,260 Powerhouse Nick
CAR-VUP 484,122 Happy Hacker
CHASE HQ 7,426,060 Powerhouse Nick
CONT. CIRCUS 4,815,390 Dolly

CRAZY CARS 93,622,590(c)
Robert Cameron
CRAZY CARS CHALL
3,000,000,000!! M Summers
CRYSTAL HAMMER
6,787,921(c) Kristy Cameron
CYBERBALL 475,000 D Marsh
DENARIS 53,900 Peter Evans
DIABLO 1,490 Timothy Johnson
DRAGON NINJA 406,400 (c) WIZE OWL
DOUBLE DRAGON 962,355 Robert Cameron
DOUBLE DRAGON II 201,330(c) The Warrior
EDD THE DUCK 5,820 A Gormly
ELIMINATOR 246,570 G Munro
EMERALD MINE Level 23 (d) Timothy Johnson
FIRE & ICE 376,750 The Prophet
FINAL FIGHT (C) LOOPY
FLOOD 13,135 Matthew Beetson
GAUNTLET III 270,509 LOOPY
GEE BEE AIR RALLY 308,726 Robert Irwin
GIANA SISTERS 112,480 A Annen
GODS 13,501,379 (c) Wize Owl
GOLDEN AXE 499.9(c) The Untouchable
HYBRIS 2,934,425 Andy Tyson
IK+ 1,039,200(c) Phouse Nick
IMPOSSIBLE MISSION 66,380 Diane Urwin
IMPOSSIBLE MISSION II 67,900 (c) David Dikes
INDIANA JONES L.C. (c) P Nicoll
INDIANAPOLIS 500 37.00 sec/
243.24mph Ian Klauss
INERTIA DRIVE 33,600 A Gormly
JAMES POND 2,500,000 Mark Shillington
KARATE KD II 54000 M Summers
KILLING GAME SHOW 699270 David Thompson
KLAX 4,396,040 Happy Hacker
Leathemack 88700 T Humphries
LIVE AND LET DIE 96,520 Merake Beaton
Major Motion 50,658 O Webster
Menace 996,481 Kamikaze Andy
MIDNIGHT RESISTANCE
332,610 Chris McInally
MndWalkr 306214 P Schumacher
Mousetrap 71,977 Davo Rich
NARC 180,800 Damien Carsburg
NECRONOM 1,181,360 J Rotten
NINJA MISSION 66,528 C Toyne
NITRO 283,000 (c) B Bannerman
NUCLEAR WAR 990 (c) P Rucci
N Z Story 546,695 E Beaton
ONSLAUGHT 39,918 A Gormly
OPERATION THUNDERBOLT
166,400 Andrew Gormly
Operation Wolf 355,680 G Wilson
Outrun 59,180,659(c) Wize Owl
OFFSHORE WARRIOR 626,345 Jacob Booth
Pacmania 3,250,140 A Burbidge
Pinball Dreams 464580351 The Fly
Pinball Magic 423,560 Paul Rucci
Pinball Wizard 3,893,570 S Hose
Pioneer Plague 35,412 K Sooby
Plutos 299,000 Davo
Populous 347,990 M Summers
Ports of Call \$10,461,843,000
Status 2680 James A Browning
POW 612,865 David Thompson
RAINBOW ISLANDS 9,999,999

(c) Timothy Johnson
RAMPAGE 212,912 G Wilson
RICK DANGEROUS II 83,810 Andrew Gormly
ROBOCOP 450,890 (c) Wize Owl
ROTOX 183,050(c) Faye Doherty
SIDEWINDER 904,350 Sharon Elsley-Eades
SILKWORM (Heli) 9,963,360 (c) Robert Cameron
SILKWORM (Jeep) 2,369,571 Kristy Cameron
SKWEEK 3,375,400 Faye Doherty
Space Ace 24,680 (c) Stare Bear
SPACE HARRIER 210,855,250 Maverick
SPEEDBALL 17,650 A Burbidge
SPEEDBALL 2 488-0 M James
StarWars 5722822 w 33 C Mings
STRIDER 175,350 Neil Young
SUPER CARS 27 races (c) L.Hetherington
SUPER CARS II Hard Level '42' The Untouchable
SUPER HANG-ON 25,042,850 David Worthy
SUPER OFF-ROAD \$4,930,000 Greg Hingerty
SUPER WONDER-BOY 208,900 Adam Annen
SUPER SPACE INVADERS
814,355 Andrew Hay
SWIV(H) 2,108,210 (c) R Adams
SWIV (J) 2,417,330 S McKinlay
Sword Sodon 403,500 S Begley
TEEN.M.N.TURTLES
546,600(c)James Leeken
TEENAGE QUEEN \$3900 (c) Ronald Biggs
Terminator II 254,960 (c) P Rucci
Test Drive 237,308 S Demchinsky
Test Drive 2 659,992 M Summers
TETRIS 65,300 (1417 Lines)
Ray 'THE LEGEND' Brown
TETRIX Level 232 Stephen Lark
THE RUNNING MAN 123,500 Daniel Rucci
Thunderblade 2034040 De Moose
Thundercats 522,300 S Southurst
TOWER OF BABEL 25,934 (c) Stephen Lark
TOKI 115,963 (C) Loopy
TURBO OUTRUN 100,260,819 Matthew Mantle
Turrican 1,735,100 (c) A Jenkin
TURRICAN II 3,307,700 (c) Matthew Beetson
TV Sports Bskt 192-39 M James
TV Sports Foot 189-0 D McKinney
TWINWORLD 24,640 Carol Love
TYPHOON 54,255 Owen Webster
U.N.SQUADRON 762,255 (c) Tony Stojanowski
VIDEO KID 371,050 Andrew Hay
VIRUS 22,637 Jason Dykstra
WHIRLIGIG 28,210 Nathan Allen
Wings 509 kills Charles Smith
Wings of Death 56,670 R Irwin
WONDER BOY 381,186,042(c) Kristy Cameron
XENON II 1,107,280(c) M Porta
ZOOM 67,051 Steve Jones

COMMODORE 64
Alley Cat 1,101,150 S Mitchell
Altered Beast 312,400 R Zanker
Arkanoid 1,730,400 S Kandaurov
Arkanoid 2 756,250 Mean Max

Batman 521,360 The Joker
Batman - Mve 1087080 M Bradley
Bangkok Knights 39,600 J Smith
Bomb Jack 521,820 Adam Wade
Bubble Bobble 6,963,930 (c) David Gavrilovic
Buggy Boy 182,790 P Murray
CABAL 194,450 The Joker
CHASE HQ 12,436,129(c) David 'Moir Jane' Sanna
CHASE HQ II 29,100 (C) A Wade
CREATURES 10,123 Adam Malinowski
Davids Mid Magic 669150 Joker
DOUBLE DRAGON 35,820 (c) Atul Prasad
DOUBLE DRAGON II 255,190 Nick van Heeswyk
Dragon Breed 496,870 H Hacker
FAST BREAK 136 to 9 C Byrne
Ghosts & Goblin 325,600 A Wade
Ghouls & Ghosts 558,110 (c) Adam Wade
Giana Sisters 287,100(c) A Wade
GRYZOR 228,600 Mean Max
H Maradona Lv M N van Heeswyk
HAWKEYE 260,400 Mat Inman
Ikari Warriors 308,300 J Aldridge
INT. KARATE 139,300 P Millward
Last Ninja II 17m44s (c) D Carter
MIDNIGHT RESISTANCE 28,540 (c) Dennis Pike
MEGA GIANNIA SISTERS
328,746 Mean Max
NEMESIS 1,633,200 Adam Wade
OPERATION THUNDERBOLT
78,600 Adam Annen
OPERATION WOLF 776,350 Winston Diaz
OUTRUN 19,952,780(c) The Untouchable
PARADROID 303,125 M Inman
PAPERBOY 103,100(c) J Nunes
PIRATES 143/100 D Steward
PowerDrift 872,940(c) A Annen
QUE-DEX 639 Chris Byrne
R-TYPE 1,890,210 Atul Prasad
RAINBOW ISLANDS 7,653,241 Adam Malinowski
RAMPAGE 180,000 Adam Wade
Rick Dangerous 66,280 A Annen
ROBOCOP 237,170(c) A Annen
Rolling Thunder 417,280 A Wade
Salamander 235,300 P Millward
SHINOBI 664,372(c) W Diaz
Silkworm (H) 1212200 R Zanker
Silkworm (J) 244500 A Blanch
Skate or Die F/S 22,850 Joker
Street Fighter 168,900 A Wade
Super Cycle 239,840 (c) A Annen
TARGET RENEGADE 330,450 C. Byrne (clocked)
Test Drive 36,144(c) J Nunes
Test Drive II 249,543 (c) A Batroc
Tetris 81,613 (1021 Ins) The Fly
THE TRAIN 9,500(c) Adam Annen
Thunderblade 1,851,040 M Inman
Thundercats 310100 S Kandaurov
T.M.N TURTLES 4397 A Annen
TRAZ 112,400 Segey Kandaurov
Turrican 1,239,040 A Malinowski
Untouchables 70,230 S Watford
WIZBALL 999,999 (c) G. Beaven
Wonderboy 4,775,470 L Walters

Scores followed by (c) indicate that the game has been completed.

USER GROUPS

The Best Source of Information

Commodore - Amiga

User Group Support

User Groups are one of the best sources of information on how to best use your Amiga computer.

Because members share the same interests as you do, the relaxed and informal atmosphere promotes new friendships and learning becomes easy whilst having a lot of fun, and fun is what it's all about. Most User Groups have "experts" that have unusual solutions to the most unbelievable problems you're ever likely to encounter!

Bulletin Boards, Public Domain Software and Magazines are a big part of User Groups and this is a real bonus for those on a budget.

Why not join?

There are so many advantages.

To get more out of your computer and Harness the Power of Amiga, then do it, join a User Group today!



Commodore 64 and Amiga Australian User Groups

For more information call the one close to you, or call Hot Shots on 02 428 7797 Sydney, 008 805067 national, for other User Groups not listed

NSW

Amug Burwood
PO Box 308 Burwood 2134 NSW
Australia

Wollongong Amiga Group (WAG)
155 Jacaranda Av Figtree 2525 NSW
Australia

Sydcorn
GPO Box 1542 Sydney 2001 Sydney
Australia

QLD

Commodore Computer User Group Inc
PO Box 274 Springwood 4127 Qld
Australia

Commodore Amiga User Group Mackay
PO Box 422 Mackay 4740 Qld Australia

VIC

Albury/Wodonga Commodore User Group
Inc
PO Box 1014 Albury 2640 Vic Australia

Shepparton Commodore Computer Club
11 Dunrobin Shepparton 3630 Vic
Australia

Eastern Suburbs Eighty Users Group
(ESEUG)
PO Box 134 Doncaster 3108 Vic Australia

WA

Amiga Users Group of WA Inc
PO Box 595 Cloverdale 6105 WA
Australia

Commodore Computer Club
PO Box 146 Willetton WA 6155 Australia

SA

South Australia User Group
PO Box 427 North Adelaide SA 5006
Australia

Amiga User Group of SA
PO Box 10131 Adelaide SA 5001 Australia

ACT

CAUSE Computer Club
PO Box 596 Canberra ACT 2601 Australia

Commodore User Group ACT
PO Box 409 Curtin ACT 2605 Australia

NT

Amiga User Group of NT
PO Box 38952 Winnellie NT 0821
Australia

TAS

Burnie Amiga User Group
PO Box 221 Burnie Tas 7320 Australia

If you would like to join or start up a User Group then please call Hot Shots on 02 428 7795



FREE ADVICE & COMPUTER SUPPORT

AMIGA - MS-DOS

TOLL FREE Ph. **008 805067** National

Ph. 428 7666 Sydney
Ph. 02 428 7797 Fax

SIMPLY PHONE AND TAKE ADVANTAGE OF:

- Set up and installation advice and assistance on Amiga and MS-Dos products.
- Software/Hardware information.
- Latest news and information from the World of Amiga.
- Local phone call cost from anywhere in Australia.
- Add-on options for your Computer
- All with friendly helpful advice.

* Free membership with the purchase of any Commodore branded product

HOT SHOTS MEMBERSHIP APPLICATION FORM

Name: _____

Address: _____

Suburb: _____ State: _____ PostCode: _____

Ph. No: _____ Male ☐ Female ☐

Age: Upto 10 ☐ 11 to 16 ☐ 17 to 25 ☐

26 to 34 ☐ 35 to 49 ☐ Over 50 ☐

Is your Commodore Computer used mainly for
Business: ☐ Pleasure: ☐

Hot Shots Computer Support

Free membership with the purchase of any Commodore branded product or a joining fee of \$25.00. Annual Subscription \$25.00

Yes, I would like to become a member of Hot Shots Computer Support I enclose my cheque for \$25.00 for membership.

I authorise Commodore Computers to debit my
☐ Bankcard ☐ MasterCard ☐ VisaCard ☐ American Express
account for the amount of \$25.00

My Card number is

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Signature: _____ Expiry Date: _____

Send to:
Hot Shots Computer Support
67 Mars Road Lane Cove, NSW, 2066

COMPUTER DETAILS

Model: _____ Memory: _____

Hard Drive Size: _____ Speed: _____

Operation System: _____ Serial No: _____

Monitor Model: _____

Printer Model: _____

Add-ons: _____

DEALER DETAILS

Dealer Name: _____

Dealer Suburb: _____

Dealer State: _____

Dealer Phone: _____

Please supply copy of receipt of purchase

Phil Campbell checks out a sophisticated new Role Playing Game set on a forbidding alien planet.

Hired Guns

Rorian Deeevergh is a mercenary. In fact, he's a mercenary leader. From his military days - five years and an entire star system away - Deeevergh has amassed a group of renegades just like himself. People who are collectively hunted by the authorities. In the high-tech future of 2707, a life of crime is not easy. All credit transactions are relayed to a central authority. Your name, ID and location are automatically logged, making life on the run almost impossible.

Not only that, skills are difficult to sell. For each ability possessed by a human, there's a robot who can do the same - cheaper and more reliably. The fact is, these days the only area where humans excel is in killing. And for the right price, Rorian's group will take on almost anything. Payment is in rare metals. No questions.

The current operation is a hostage rescue from the catacombs of a backwater planet called "Graveyard." The client? Who knows? No questions asked. And after all, if one terrorist organisation takes hostages from another terrorist organisation, nobody much cares. That's why a group of mercenaries fit the job profile perfectly - and why red tape and protocol can be ignored. What does it matter who gets in the way? The game begins. You've landed safely on the ever-so-cheerfully named planet of "Graveyard," just outside the catacombs.

The screen is split into four quadrants, each quadrant showing the view from the eyes of one member of the team. This takes a bit of getting used to - because naturally enough, the one person you won't see in the window labelled Rorian is Rorian himself! The game is mouse controlled - click inside a view window, and the character will move in the direction of your mouse

pointer. Above each window there's a row of control tabs, giving access to the team member's inventory of weapons and other goodies.

As you guide your team around the catacomb complex, watch out for hidden security wafers - electronic keys that will take you into hidden areas. You'll also find Teleport units, moveable blocks and other obstacles that will stretch your problem solving ability to the limit.

Take care! You'll also bump into plenty of nasty creatures, some of which will hatch from eggs in front of you. In my first foray into the Graveyard Catacombs, I soon met a member of the "undead" - and ended up dead myself.

The fact is, the vast majority of the encounters in the catacombs will end in bloodshed. Whether it's your blood or your enemies' depends largely on the weapons in your arsenal. Make sure you've chosen a suitable weapon from

FACTBOX

Hired Guns is a four player RPG with plenty of detail and sophistication.

Graphics:	83%
Sound:	78%
Gameplay:	86%
Overall:	85%

I played the pre-release Amiga demo-version. Distributed by Sega Ozisoft (02) 317 0000.

your backpack before you start!

In essence, *Hired Guns* is a dolled-up role playing game. As usual, your game characters are described in terms of a set of statistics - in this case, Fitness, Physique, Psionics and Experience. But the game certainly breaks new ground in terms of scope and presentation. Up to four independent players can join in the game on one machine. And the playing area is huge, with over 8 megabytes of data packed onto five disks. Graphics are nice, though small, and best of all, character images are fully customisable - if you have a scanner, you can even add yourself to the game! □



Finally, Phil Campbell discovers a game that's genuinely nice.

Trolls

My mum refuses to read this section of the magazine. She says the games I review are too ... well, too nasty. And maybe she's right. I mean, all the blood and guts and carnage. She's really pleased that Sega-Ozisoft's Kevin Bermeister has introduced voluntary censorship ratings for games - but she reckons everything should get an "R".

Well, this time - just for mum - I'm adopting a temporary NO NASTINESS policy. Because this is a review of a game that hasn't got a nasty byte anywhere - *Trolls*.

Packaged in a bright-as-a-button box, the game features those cuter than cute Troll dolls with the snub noses, black beady eyes and electric-shock hair that you can find in any toyshop. Perfect!

Gameplay is self explanatory. Guide your cutesy Troll through the garishly coloured Candyland, Toyland and

Medialand - to name just a few - in the quest to find and rescue the kidnapped Baby Trolls.

Let's start with Candyland, the most sickly-sweet level of all. Icy Poles and lollipops sprout like trees from Chocolate bar gardens; Candycane poles reach tall into the sky; licorice bullets are suspended from nowhere, forming convenient steps between caramel fudge footways. It's a typical "platforms and ladders" style layout - all done with a \$27 bag of mixed lollies from your local corner shop.

There are, of course, some hazards. The Baby Trolls are scattered around the playing area, but to find them you'll have to avoid bouncing bombs, a galloping rabbit - the Easter Bunny, I presume - and a bunch of deadly fat-boys. Too many collisions, and it's curtains.

Around the levels you'll find balloons containing magic yo-yos. These

FACTBOX

Trolls is a bright and breezy platform game full of colour and fun. It's absolutely harmless!

Ratings

Graphics:	79%
Sound:	78%
Gameplay:	77%
Overall:	78%

Distributed by Hot Point Software (02) 428 7791. RRP \$69.95.

are handy. You can use them to knock out the nasties with a quick blow to the head - oops, sorry Mum - or you can attach them to platforms and swing tarzan-like across otherwise impassable chasms.

Trolls can be played with joystick or keys. After testing both options, I settled on the keyboard, which was faster and more direct. Your troll walks, runs and jumps at your command - his movements are slick and smooth, and in true *Mario Bros* tradition, you can steer him mid-jump.

So there it is. A game that's genuinely NICE. A boppy little sound-track, every colour of the rainbow flashing on the screen, cutesy little trolls - and best of all, it's actually pretty good fun to play. Even your mum will like it. □



Superfrog Solution

Part 2

Last month we left our intrepid *Superfrog* at the end of the first section of the Spooky Castle. In this ribbeting installment, Jesse Ahern takes you on a guided tour through the remaining levels ...

The Funpark

Escaping from your circus captors, you learn of a strange machine somewhere in Funland. Grab the coins and jump onto the spurting water to jump across the spikes. Get some more coins on the way. Go down the snowy-slope, and jump over the Slow-Down Pill. Superfrog can hold his breath, but you can jump over the Piranha Tank if you prefer. Grab the bonus stuff above the tank. Jump over the spiked turtle and get the Speed-Up Pill. Squash the Worm, and jump up onto the next ledge. Jump over the sets of spikes, and get the coins on the way. Grab the Speed-Up Pill, and jump through the chain of the Mace-Head. Ignore the 'ACME Sucking Thing' for the time being. Squash the ladybug while it's on the ground, and keep heading right. Go down the hole, squash the turtles and grab the bonuses. Go back up and onto the ledges, dodging

the guns. Flick the switch, and go back to the 'ACME Sucking Thing'. Jump into it, and you will be transported back around to near the turtle hole. Go right, and jump over the spikes (grabbing the coins) onto the snowy-slopes. Be quick, or you'll slide into the spikes. Keep this up until you reach the end of the spikes. Go far right to find another secret tunnel filled with bonuses. Take these, and head up into a room filled with steps and spikes. Negotiate these, and at the far right you will find the Exit.

The Ancient Pyramid

Through the haze, you see a legendary place with strange artifacts and symbols. An ancient pyramid seems the only option. Jump to the right, and collect the coins (careful not to get spiked by the thrusting spikes). Jump right up to the ledge and collect the coins. Drop down onto the ledge between the spikes. Now jump to the next, making sure not to be hit by the flame-shooting gun. Get all the bonuses on the way across the spikes. Once you get to the end, go down the slope (ignore the Speed-Up Pill just now) and dodge the thrusting spikes and Rock-

Crushers. In between the last two spikes, you will fall into a secret tunnel. Grab all the bonuses, and jump into the top-left corner of the cavern. Follow this tunnel to some more bonuses and a spring. Jump onto the spring to end up right back at the start. Go back to the slope, and jump up to collect the Speed-Up Pill. Jump up into the wall, and find a very handy short-cut over the spikes and crushers. Get the Lucozade and drop onto the slope. Jump over the boulders get the bonus things on your way up. At the top, jump across the spikes, get the Lucozade, and jump the second set of spikes. Run down the slope and get all the bonuses. Squash the Slug, and jump onto the spring. Keep jumping up, collecting the bonuses and dodging the fireballs. At the top, jump onto the spring and push left or right to dodge the spikes in the roof. Go back down the other side and continue to the right. Jump the spikes and land under the Pharaoh's Eye. Be careful, as it shoots at you. Go left, and you will fall down a secret tunnel. Get all the bonuses and go right into another tunnel. You will find more bonuses. Head back up into the first cavern and jump up to the top-left to find ANOTHER tunnel. Take all these bonuses, but don't jump on the spring. Go back to the first cavern and go to the bottom-left. You will find the last bonus tunnel. Follow it along, and get the bonuses. At the end, you will find a spring. Jump on it, and you will land on the spring in the first bonus tunnel and be shot back up to the start. Go back along the level until you reach the Eye again. This time, jump over

Ice World

SNOWMEN- Just waddle around. Can't be squashed or shot, so just jump over or dodge.



PENGUINS- Waddle around like the Snowmen do, but stop occasionally to pelt snowballs at you. Dodge them.



ICICLES- These spears of ice drop from the roof to embed themselves in the ground when you approach. Watch out.



SLOPES- These slopes are more slippery than the slime on the floor in the Funpark level. You might be able to run up them with plenty of Speed-Ups, otherwise just jump up them.



Project F

SPHERES- Enter the screen and shoot at you. They take about four or five shots to kill.



BLOBS- Come into the screen and explode in a cluster of bullets. Kill quickly before they burst.



SPACE INSECTS- Enter the screen and float around. Shoot 'em.



SAUCERS- Just float up the screen from bottom to top. Shoot them and collect the bonuses they leave.



LIGHT BULBS- Fly in and shoot bolts of electricity at you. Destroy them quickly as possible.



LADYBIRDS- Enter in waves. Just shoot them and collect the bonuses.



MISSILES- Fly in as one, but split into three. Shoot quick, they are too fast to try to dodge.



BATS- Identical to the ones on the Spooky Castle level.



MUMMIES- Stagger through passageways. Can't be shot or squashed, so avoid.



SLUGS- Like the Worms. Jump on twice to collect the bonus.



BOULDERS- Roll down slopes. Leap over them. They can't be shot, and trying to squash them will hurt.



SPIKES- Usually spring up in a pattern of two thrusts followed by a short pause. Run past at the pause or jump over.



The Ancient Pyramid

the right-hand spikes and squash the three slugs near the exit before going through.

Ice World

As you begin to thaw, the ice caverns look quite inviting. But you soon discover that icy slopes and slippery frogs don't combine well!

Run right down the slope, collecting the coins. Jump over the Snowman, collecting the coins on the way. Get the Speed-Up Pill, and leap over the spikes and across the ledge, getting the coins. Run up the next slope, getting the bonuses. Jump over the Penguin and get the coins. Run under the Ice-Crusher and you will come to an icy lake. Jump onto the iceberg, grab the coins and jump off again quickly (because you will slide off, and Superfrog doesn't like icy-cold water!) Enter a dark and spooky cave, and jump onto the ledge. Jump through the Mace-Head, get the bonuses and continue right. Run quickly under the Stalactites before they drop on you. Slide down the slope and get the Lucozade. Jump onto the ledge and over the snowman, grabbing the coins.

Jump over the spike pits, getting the coins as you go. At the end of the pits are three Ice-Crushers. Get past these and the Exit awaits.

Project F

With similar title screen and music to Project X, any fan of Team 17 will be amused by this tribute to the Team's first big hit. Just like the original game, just destroy the enemies and collect the bonuses. Check out the Project F glossary to see the enemy stats.

Space Level

Popping on your spacesuit, you set out on the final part of your mission: To reach the witch's interstellar lair.

To start with, DON'T jump on the springs to the left or right of you. They will catapult you into spikes in the roof. Jump to the left, shoot or squash the Floaters and collect the bonuses. Go back to the right and get more bonuses, but dodge the Walker. Grab the Lucozade, and jump up onto the ledge with the Bigmouth. Squash him and jump up to collect the

FLOATERS- Just like the old Bees. Either jump on them, or shoot them with your Destructo-Spud.



BIGMOUTHS- Scamper around, now and then stretching upwards. While running, they can be jumped on. Don't try it while stretching.



WALKERS- Run around in your way. Sometimes they shoot a barrage of pellets at you. Avoid these guys, they are un-squashable.



LASERGUNS- Similar to the Stone Faces. Wait until they have fired.



ROTATING GUNS- Very annoying. Their aim is accurate and they are hard to dodge. Don't hang around them for very long!



Space Level

coins. Don't jump on this spring either, or you'll suffer the same fate as before. Dodge the Rotating Gun and run down the slope. Jump over the Mace-Head and activate Switch number One. Dodge the second Mace-Head and jump over the Transporter to get the bonuses. Now, enter the transporter to be beamed up to the next floor. Beware of the big LaserGun, and drop down onto some springs. Go right up some steps, dodging Laserguns and spikes. When you reach the top, beware of the Walker and jump onto the small ledge. Grab the coins (watch out for the Laserguns) and keep going right. Grab the bonuses and things, and squash another Bigmouth. Go up a set of ledges, beware of more Laserguns. At the top, go down another slope and dodge two more Mace-Heads. Grab a few more bonuses before going through the exit.

That's it for the first part of each level. The rest of each level will be similar to the first, so you should have no worries. One final tip - once you have collected the wings, use an autofire joystick to make flying a bit easier. That's it - have fun! ☐

Computer Adventure Games - Hints and Tips

(The Second Adventurers Realm Hint Book)

Detailed clues to over 25 top notch adventure and role play games
Post or Fax your order to: Saturday Magazine Pty Ltd, 21 Darley Rd, Randwick NSW 2031. Phone (02) 398 5111 Fax (02) 398 5322

\$10 each including postage

I enclose a cheque or money order for or

My Bankcard Visa card Mastercard number is

Name (print)

Signature

Address

Postcode

Graham Gooch World Class Cricket

Daniel Rutter

"Lacking a national religion, the English invented cricket to give themselves a sense of eternity." I'm too lazy to look up who said it, but by and large I agree. So I approached the review copy of *Graham Gooch World Class Cricket* with a degree of trepidation - I anticipated an experience with all the dynamic excitement of an old folk's home dinner dance. GGWCC, however, is actually rather good.

The game comes on one unprotected disk, with a tiny but comprehensive manual. There's no copy protection of any sort so the disk's easy to back up, but on the down side you can't install the game onto your hard disk.

The opening screen's a bit dodgy, but all of the other game graphics are really good and smoothly animated. You choose your squad of 20 players and the 11 you want to use for this game - there's an auto function to pick the best team - and then you pick your opponents, whose team you can also choose from the squad if you wish to recreate a given game. All nine Test teams are included, plus a "World XI" which would no doubt cause some debate among aficionados.

I picked the World XI, and for some really tough competition decided to go up against England. I won the well-animated toss and decided to bat first; after a flurry of willow on (well, mainly off) leather I was all out for eight.

The batting system is quite good - you view the pitch from the bowler's end, watching where the bowler's going to place the

ball and trying to line yourself up. When the bowler has let go of the ball you choose the stroke to play by moving the joystick to the appropriate position - although it took me a couple of wickets to figure out how to swipe at the blooming thing.

Assuming you've hit the ball, you then decide whether it's a good idea to run. If so, you revert to the age-old tradition of sport simulations and waggle the joystick like crazy to get the batsmen to change ends; if at any point taking another run looks a dodgy proposition, a tap on the joystick button returns the batsmen to their creases. Fours and sixes are handled automatically, returning the batsmen to their original ends.

Bowling is just as simple - aim the ball with the little square, hit the button, select direction of break or swing if you're controlling that sort of bowler, then waggle like mad. The amount of waggle controls the degree of break or swing, or the speed for a fast bowler. I tried really hard to do some evil short pitched deliveries, but it seems to be

FACTBOX

Even if you're not a cricket buff this game will entertain you. Smooth, detailed, accurate and playable.

Ratings:

Graphics:	85%
Sound:	75%
Gameplay:	80%
Overall:	80%

Distributed by Hot Point (02)
428 7791. RRP \$69.95.

impossible to hurt the batsman. Shame.

The fielders work automatically, but you can position them wherever you like. There's a special more detailed positioning screen for placing slips and the wicket keeper - which will happily allow you to put the keeper six feet to the left of the batsman if you really like giving away byes.

The control system for one player games is joystick to control play and mouse for the more complex options, which works very well; but you can also play a two player joystick game, which is a great way to learn since you're both about as incompetent as each other. You can also watch the computer play itself, but it didn't make me any better.

You can save your game at almost any point - handy, since even at the accelerated pace of the computer game some games can take many hours - and all squads are editable. You can create whole new teams if you want, too, so statistics freaks can play about for hours.

Overall, GGWCC is the best cricket simulation I've seen so far. Smooth, detailed, accurate, playable and not very boring at all. Even if you're not a cricket buff this game will entertain you, and the slick graphics can only help. It'll run on any Amiga with at least 1Mb of RAM. □



MICHAEL SPITERI'S

Adventurer's Realm

Welcome adventurers! To new adventurers who have joined us, congratulations ... you've just been linked into a huge base of hints and tipsters! This is the part of the magazine that tries to help out troubled adventurers everywhere - and we usually achieve it. Not only that, we provide many services to the adventure playing public. If you're stuck in an adventure, you can write to one of our many clever contacts scattered over the nation, or you can drop a line to Kerrie in the Free Hint Sheet Department. Finally, you can send your problem directly to me, and if I can't help, it'll be printed among these pages for all to see.

If you can help out a troubled adven-

turer with specific or general hints, please send them in. You can use out free classifieds or you get just send in a letter full of your comments!

The address to write to for stuff on adventure games, problems and hints is: Adventurers Realm, 12 Bridle Place, Pakenham, Vic 3810.

Kamikaze Andy lives in his Dungeon, and as well as occasionally supplying a roving report, he also supplies those role-playing game freaks with hints (but no hint sheets!). His address is: Realm's Dungeon, PO Box 1083, Canning Vale, WA 6155.

Always enclosed a stamped addressed envelope when writing to any address printed in this article.

Free Hint Sheets

Kerrie, the Lady of the Realm, is swimming through this month's mail, sorting out all the hint sheet requests. Why does she have so many? Because

she is giving away free hint sheets to anyone who asks. Remember, you must send Kerrie a stamped addressed envelope and a list of four games from the selection below. By the way, the address to write to is: Free Hint Sheets, 12 Bridle Place, Pakenham, Vic 3810.

Mortville Manor/Maupiti Island, Monkey Island 1, Monkey Island 2, Space Quest 3, Space Quest 5, Wonderland, Leisure Suit Larry 3, Champions of Krynn, Kings Quest 5, Pool of Radiance, Zak McKracken, Zork 1, Zork 2, Zork 3, Bards Tale 1, Bards Tale 2, Bards Tale 3, Hitchhikers' Guide to the Galaxy, Guild of Thieves, Jinxter, The Pawn, Corruption, Faery Tale, and the 1993 Clever Contacts Listing.

Realm's Hint Books

Hurry up and send in those orders for the First Official Realm Hint Book - we are nearly sold out! You can also order the Second Official Realm Hint Book that features detailed hints for over 25 games as well as pages upon pages of mapping sheets.

How much for all of this? Just nine dollars for the first and \$10 for the second, but be quick because the supply is running dry. Drop a line to Darrien Perry at head office (21 Darley Road, Randwick, NSW 2031), or you can ring her on (02) 398 5111 for any additional information.

Realm's Official Adventure Solutions Disk Orders are coming in thick and fast for the new official solutions disk containing very detailed solutions to 95 (yes, you read right!) adventure and roleplaying games.

Graeme Beavan has done a great job putting this disk together which features dramatic icons and two main directories because all the games wouldn't fit on one. If you'd like this wonderful data, enclose a cheque for \$5 (payable to Michael Spiteri), a diskette, and a stamped addressed envelope. Or make the cheque \$7 and we'll supply the disk and postage costs. To ensure a quick turnaround, send it all to Realm's 1st Hint Disk, 12 Bridle Place, Pakenham, Vic 3810.

A big thanks to Compupal for supplying the Realm with a decent Amiga disk copier.

Clever Contacts

You can get a complete list of clever contact by writing to Kerrie in the Free Hint Sheets Department.

Only updates this month are:

Matthew Armstrong (see Chat for address), who can now also help in *Countdown*, but can no longer offer the *Bards Tale* Team disk as it was accidentally erased.

Stuart George (see Trading Post for address), who now adds *Space Quest III* and *Codename: Iceman* to his long list. (I refuse to publish your ICON joke, Stuart - it was terrible!).

If you would like to be a Clever Contact, send your details to the Realm and prepare for a flood of mail. Meanwhile, a big thanks to all the Clever Contacts for doing such a great job.

Chat, News, Gossip and Gags

News from the States has indicated the new *Zork*, *Return to Zork* is most definitely an icon driven graphic adventure game. This move might not win the hearts of the original Zorkers, but it might interest the curious Zorkers as to whether Activision's graphic representation is close to the image created by the classic text.

C64 owners rejoice - a new magazine has been created just for you. It even comes with a public domain disk and sells for only \$5. The June issue features heaps for adventurers, including the solution to *Maniac Mansion*, plus a free adventure game called *The Detective* on the attached disk. This little magazine has been put together by the boys and gals at Compupal. You can write to them at 116 MacArthur Street, Sale, Vic 3850.

Dean McIntosh of Greystanes, NSW writes ...

"Once again, congrats on a top info exchange, but why are there no hint sheets for *Eye of the Beholder I or II*?"

Mike: Good question, Dean. If someone out in roleplaying land can put together a combined hint sheet for the first two *Eye of the Beholder* games, please, please do so!

Very Regular Realmer Matthew Armstrong of 11 Harcombe St, Bell Post Hill, Geelong Vic 3215 has gathered his talents into his own software firm called Armour Software. \$1 will buy you his demo disk, (you have to supply the disk) and \$5 will buy you *The Great Space Race*. Drop him a line for a complete list of titles. Meanwhile, Matthew writes ...

"Does anyone know for sure whether *Space Quest 5* is in fact coming out on Amiga, and is *X-Wing* coming out on Amiga? I don't see why companies are dropping the Amiga. Yes, there are a lot

of pirates about, but I haven't heard of any companies dropping PCs, even though pirating is a problem with them too."

Mike: Unfortunately for Amiga users, the PC has a much bigger user base than the Amiga and is not hurt as much by piracy. Multimedia and CDs are taking off in a big way on the PCs which in turn will kill off piracy (you cannot copy CDs cheaply). Your average PC game uses between six and ten floppy disks, which also deters pirates. Don't worry though, the Amiga is huge in Europe and you can expect to see some great titles flow from overseas.

As for Sierra, they'd be silly to ignore the potential of the Amiga 1200. Electronic Arts are one company who will definitely be supporting the A1200.

I've been playing *Space Quest V* on the PC lately, and believe me, it's great for an icon driven adventure.

Adventurers Realm Trading Post

Not only does the Realm offer Free Hint Sheets, but we also offer Free Classified Ads. If you would like to swap, sell or search for any type of game, send the details to Realm's Trading Post, 12 Bridle Place, Pakenham, Vic 3810. Don't try to advertise pirated stuff, or we'll be very, very annoyed!

Peter Harvey of 14 McClintock Drive, Muswellbrook, NSW 2333 currently owns *Defender of the Crown*, *SDI* and *King of Chicago* for either *Castles* or *Ant Heads*.

Kent Reynolds of 114 Epping Road, Lane Cove, NSW 2066 has a *King's Quest I* hint book for sale. It's in perfect condition and is only \$9.00. If you don't want the book but you want some hints on *Kings Quest I*, you can ring Kent on (02) 427 2974.

Chris Turnadge of 29 Sapphire Road, Morphett Vale, SA 5162 is after *Neuromancer*. He will pay top dollar for it or is willing to swap *Mean Streets*

for it. If you are in South Australia and can make a deal with Chris, then whoopee, otherwise drop him a line.

Jason West of 74 Matthews Avenue, Seaton, SA 5023 would like to buy *Ultima 4*, *Pool of Radiance*, or any other AD&D games for under \$25 for the C64.

Matthew Armstrong (see Chat for address) is searching high and low for the original *Zork*. Someone out there must have one stashed away under a trapdoor beneath their rug in the living room.

Matt Grocott of 48 Pinkstone Avenue, Cootamundra, NSW 2590 (06) 941 4146 (after 4pm weekdays) currently owns *Monkey Island II*, and would like to swap it for *Fate of Atlantis* (the adventure game) or *Legend of Kyrandia*.

Gavin Goodman of 79 Davies Avenue, Springwood, NSW 2777 has three games he'd like to sell. First up, *Hardball 2* (for \$20), then *Rise of the*

Dragon (also \$20), and finally John Madden Football (for \$30). Gavin will swap his titles, and he is after *ABC Monday Night Football*, *Maniac Mansion*, *Tipoff* or *Robocop 3*.

Derick Lyle of 37 Tukara Road, South Penrith, NSW 2750 has a whole swag of games available, including *Windwalker*, *Shoot'em up Construction Kit*, *Paradroid*, *Gods*, *Wings of Fury*, *Nuclear War*, and *Lords of the Rising Sun*. Derick will accept offers, or will swap some for some good adventure games such as *Silver Blades* and *Monkey Island*.

Stuart George, 68 Sharon Street, Springvale, Vic 3171 has two PC shareware adventure game creators - *Quest Maker* and *Adventure Game Tool Kit*. Send Stuart a disk (any type) and \$5.00 to cover postage and you'll receive both programs.

Problems, Problems & more Problems or the Troubled Adventurers Dept.

First up is Regular Realmer Stuart George, who as usual, is neck deep in adventure type problems. Firstly he is still having trouble getting the mark of the snake in *Ultima III*.

However what's really troubling Stuart is *Time Quest*. Maybe we'll let him explain this one ...

"I have saved Caesar, made King John sign the Magna Carta, and raided

Peking with the Mongols. I have also escaped with a knife from a cannibal pot. What do I do now? Currently I am in Baghdad and up to my armpits with women in a harem (Mike: Some problem!) trying to find one that is having an affair with someone else. Is it possible to sneak away from the palace while wearing a veil (WHY!).

In another part of the game, how can I make the girl hide? She is in the basket but I can't lift her onto the mule. What gift does King Tut want? How can I become tall enough to see through the window in the temple of Mexico?"

Mike: Boy, Stuart, are you sure it's *Time Quest* you are playing, and not *Leather Goddesses of Phobos*? Anyway, can anyone help him out in his interesting, to say the least, dilemma?

Stuart would also like to know what to do with the ghost in the cemetery in *Colonel's Bequest*.

Also stuck up to his neck is Matthew Armstrong, who writes ...

"Any help in the Omnicron Conspiracy would be of help, and would someone please help me and my mate Andrew Malden get out of the furnace room in *Dagger of Amon Ra*. Finally, what are the exact words to type in *Larry 2* to put the soap down your top while at the island?"

Jason West of Seaton in SA is having trouble in *Ultima 6*. He would like to know where Captain John is and how to get there. Also, a man in Paws (or cat who runs the pub) wants to buy a book about gambling or something.

Mike: I think if you know what Jason's on about you are half way to solving that problem. Oh yes, forgot to mention that back in June, Jason West wanted help in *Jack the Nipper* not *Jack the Ripper*. Hey, it was an easy mistake to make!

Help, Help & more Help or the Smart Adventurers Dept.

Game: Enchantia

For: Person with no name (May issue)

From: Matthew Armstrong and Graeme Beaven

Matt's Help: You have to do everything possible in the cave section before the well is fixed and you cannot catch the gray sponge dudes. Chase them all out and you'll find something in one of the holes. For the string, use a magnet with the rope that you get from Mr. Rock Crusher.

Graeme's Help: Look in all four holes until a little creature runs out, then look again and get the twigs. Join the string from the guru with the magnet and throw it in the hole to get the spool. Use the spool with the eyebolts and then go to the wishing well.



Game: Indy 4

For: Stephen Treloar (June Issue)

From: Matthew Armstrong

Help: (stuck at set of skulls) If you are playing *Last Crusade*, the answer can be found in the diary that comes with the game. If you are referring to *Fate of Atlantis*, then I can't help.

Game: Colonel's Bequest

For: Peter Coleough

From: Stuart George

Help: There are more than four secret rooms. It's a pity you didn't say what part of the game you were up to (ie. what time was it on the clock that is

periodically set after each important event). However, here are some hints for you. Feed the dog and check out his kennel. There is a creaky board in the church that needs a good lift. The horse likes a carrot but you have to befriend Celie with some jewelry first. The Colonel is actually a good guy so don't shoot him at the end. The location of most of the bodies is the basement (I think) but as yet I have not been able to enter it without dying. Follow Rudy around when he goes outside to see a good fight. There is a key hidden in the cannon in the Colonel's Room that operates the lift. You can only open the suit of armour with some oil. The key inside is for the fountain.

Game: Eye of the Beholder

For: Matthew Beetson

From: Stuart George

Help: As far as combination locks go on Level 9, the only sort of combination lock is where you have to put some armour in one wall, a sword in another, rations in another wall and a rock or arrow in another. After all this the door in the south should open up.

The Dungeon by Kamikaze Andy

While adventurers are still waiting for the Amiga version of *Darkseed*, the acclaimed horror adventure game from CyberDreams (*Mike: Actually, it was reviewed in June ACAR*), the company has released press information on a new product slated for Christmas release. Titled *CyberRace*, this is a mixture of arcade/simulation/adventure (how's that for trying to appeal to every possible market?) featuring 3D visuals and video-realistic footage. Indeed, the graphics on this baby will blow everything else off the software shelf - from stunning colours to the high resolution level to the amazingly fluid animation. Add a touch of digitized dialogue between the game's characters and a professionally produced musical score, and you have what is shaping up to be a potential blockbuster.

SSI's *Eye Of The Beholder III* looks

like being the last of the series, and features some of the toughest battles you will ever face in any RPG. As can be expected, the interface retains the same look as its predecessors, apart from a few cosmetic touches (like new monster portraits and animated scenes). Expect this latest AD&D installment to arrive at the stores in a few month's.

The long awaited *DarkSun* is due to materialize later this year, while the much hyped science fiction RPG simply called *M* might not make it - ever. The reason? SSI has recently retrenched some of its staff in an effort to cut back on expenses, which explains the delays in producing Amiga conversions (and even PC versions are feeling the pinch!).

SSI's horror RPG *Veil Of Darkness* has still a 50-50 chance of undergoing the Amiga conversion process, but the continuing worldwide recession is having a detrimental effect on the computer entertainment scene, and ultimately the ones who suffer are those products that can't be guaranteed bestsellers.

Veil Of Darkness only performed moderately in sales for the PC so Amiga owners might miss out altogether.

Similarly for MicroProse (who "gave up" more than 30 staff members) and their plans to convert more of their popular PC titles to Amiga format. It now looks as though their first adventure attempt, *Rex Nebular And The Cosmic Gender Bender*, might not bend its way towards an Amiga version. Which, from the feedback of adventurers who played the PC version, might actually be a blessing in disguise ...

The situation at Sierra is just as serious, they lost upwards of 50 people from both the parent company and its subsidiary Dynamix. Indeed, quite a few of the well known Sierra designers have opted to start their own companies, creating games and then selecting the best offers from the various software publishers around. Of course, the strong links between these designers and Sierra means that most of the final "independent" products are marketed under the Sierra label anyway (like Al Lowe's latest offering, the cowboy-comedy adventure *Freddy Pharkas: Frontier Pharmacist*) but there are some, like *Police*

Quest designer Jim Walls, who have opted for better deals. Walls' next production, *Blue Force: The Next Of Kin* is due to ship from newcomers Tsunami.

Speaking of Tsunami, the company is apparently under threat of lawsuit from Sierra for alleged theft of programming code. Could this have something to do with Walls' defection to the company, I wonder. So far, Tsunami has released *Ringworld* (based on the novel(s) by noted science fiction author Larry Niven) and *Protostar: War On The Frontier*, on the PC. No news as yet on any possible Amiga conversions.

Sierra's schedule is similarly congested, with forthcoming adventures like *Space Quest V: The Next Mutation* (yet another episode in the adventures of hapless space janitor cum hero Roger Wilco), *EcoQuest 2: Lost Secrets Of The Rainforest* (this time our young hero Adam tries to save the Amazon forest from destruction), *Gabriel Knight* (a suspense thriller set in New Orleans), *Codename: Phoenix* (a new spy thriller in the same vein as *Codename: Ice-man*), Al Lowe's *Freddy Pharkas*, and apparently, *Police Quest IV*!

The new goblins currently employed by the Dungeon aren't too sure whether Sierra had intended Jim Walls' *Blue Force* to be the next *Police Quest* before his decision to switch publishers. If so, there's going to be some late night designing and coding going on at Sierra's Coarsegold headquarters to make the Christmas 93 deadline!

Coming up in the next few Dungeons:

The latest from LucasArts, including the long awaited *Indy And The Fate Of Atlantis*, *Day Of The Tentacle (Maniac Mansion II)* and a science fiction adventure from Brian Moriarty (he who wrote *Loom* and the classics *Trinity* and *Wishbringer*) titled *The Dig*.

And, a look at the rush of CD-ROM games that are poised to hit the markets (sadly, most are on the Multimedia MPC format, not CDTV). Come on Commodore! CDTV/Amiga CD-ROM needs a push before we're overrun by MPC, CDI, Sega MegaCD, Nintendo SNES-CD, and Tandy's new VIS CD system!

Advertiser's Index

ACAR Subs Form	39	Hargware	52
Allens	29	Impulse	
Amadeus Computer	51	Logico	19
Amitech	40, 41	Megadisc	49
AmigaP/D Ctr	61	Meghead	15
Amiganuts	63	MVB	10, 11
BitMaster	61	Off the Planet	57
Brunswick	63	PCM	57
C64 Software	63	Pactronics	4
Caradoc	63	Parcom	61
Clip Art Collection	63	Pelham	63
Code One	63	Phoenix	23
Computa Magic	53	Power Peripherals	
Commodore		3, 5, 7, 9, 65, IBC	
IFC, 47, 70, 71		Prime Artifax	66, 67
Computer Man	2	Rod Irving	63
Computer Outpost	18	Runwell	63
Computer Spot	25	Scarlet	63
CPA	44	Sigmacom	30, 31
Desktop Utilities	13	Shop 4	45
Don Quixote	21	Software to Go	57
Electronic Design	OBC	Solutions Rendered	37
Fairbrothers/Mallee	56	Softwood	34, 35
Fonhof	52	Tupsoft	12
G-Soft	28	Unitech Electronics	59

Introducing ImageFX™ ... No professional art department should be without it

Only ImageFX gives your imagination total image processing freedom.

Whatever visual medium you work in—photography, graphics, video, animation—ImageFX is the one tool you absolutely must own!



It's like having a professional art department at your fingertips.

ImageFX is faster, easier to use, more expandable, more adaptable and more powerful than any other product of its kind for the Amiga®.

Here are just a few ways ImageFX expands your visual horizons:

- ★ Scan in or framegrab from a full range of image capturing devices directly into your Amiga.
- ★ Use your Amiga as an image prepress, color correction system including, CMYK, RGB, HSV and YUV.
- ★ Digitally retouch any image with the most complete set of filters, color gradients, image distortions, masks, and text handling tools available.



Carsmeat by Mike Vunck

- ★ Automatically convert image files to/from over 20 different file formats.

- ★ Create true, full motion polymorphic "morphing" animation just like they use in movies, commercials and music videos.

- ★ Generate single and dual image morphs; wave, ripple and spiral effects; water and glass-like distortions; and a wide range of 24-bit transitions.

- ★ Make your own add-on features with full ARexx™ and C programming language support.

- ★ Enjoy near "real time" painting in 24-bit color.

ImageFX is the most exciting and versatile full color, image processing and enhancement system ever made.

You owe it to your imagination to buy ImageFX.

Image Processing

- ★ Regional Processing
- ★ Anti-Aliasing
- ★ Composite Imaging
- ★ RGB, CMYK, HSV Adjustments
- ★ Contrast, Gamma Adjustment

Special Effects

- ★ Full Motion Morphs
- ★ Single/Dual Image Morphs
- ★ 24-Bit Transitions
- ★ Waves and Ripple Effects
- ★ Spiral Effects
- ★ Water/Glass Distortion

Image Rendering

- ★ Amiga, ECS/AGA Modes
- ★ HAM-E, DCTV, GIF
- ★ Multiple Dither Controls
- ★ IV24, FC24, EGS 24-Bit Output

...and much more



Give your Amiga graphics and animations new magical powers — at an affordable price!

If you need ImageFX™ morphing power alone, CineMorph is for you.

CineMorph transforms any image, or images, from one to another quickly, easily and with the professional quality "morph" results you see at the movies and on TV.

With CineMorph you can:

- ★ Warp single or motion images, create full motion morphs, merge scenes, and perform digital dissolves.
- ★ Set different speeds for different parts of the morph.

- ★ Work quickly and easily with Amiga style controls, then output directly to any Amiga, DCTV™, or HAM-E™ systems — including 24-bit display boards like GVP's IV24™.



Remember: When you're in the market for morphing, and only morphing, CineMorph is the maximum performance morph power.

CineMorph is the must-buy morph software.

cinemorph™

Amiga is a registered trademark of Commodore-Amiga, Inc. ImageFX, CineMorph, and IV24 are trademarks of Great Valley Products, Inc. All other trademarks are the property of their respective owners. © Copyright 1992 Great Valley Products, Inc.

Distributed In Australia By



1st Floor, 257 Hawthorn Road
Caulfield North, 3161
Telephone: (03) 532 8553
Facsimile: (03) 532 8556

Genlocks for Amiga & PC!

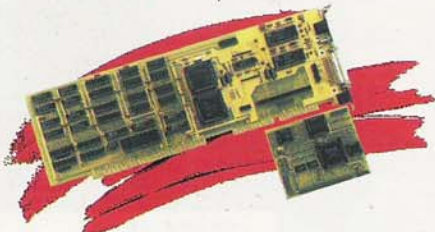
PAL- and Y-C-Genlock

For composite (PAL-Genlock) or Y-C and composite (Y-C-Genlock) signals, excellent quality, fading of the Amiga or video image, key-invert, image controls such as saturation, contrast and brightness, automatic RGB-splitter for Digi View, signal-transcoding from Y-C to PAL and vice versa, runs with the A3000 flicker fixer. Incl. Scala 500 Junior!



FrameMachine + Prism 24

High speed realtime digitizer for the Amigas 2000, 3000 and 4000. Features scaling, Loaders and savers for Image Master and Art Department Pro, editing tool for sequences, 24-Bit graphics, real-time video overlay, video mixing with ED-Genlocks! New Software 2.1 AGA supports HAM8, special effects, excellent performance...



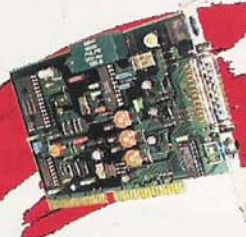
FrameStore

Realtime digitizer for all Amigas with composite and Y-C inputs. Software controlled PAL / NTSC selection. The new software 2.0 with HAM8, dithering, de-interl. ... Ideal for the Amiga 1200!



Video Converter

This Video Converter provides composite and Y-C-outputs in real broadcast quality. Compatible to any Amiga 2000 - 4000.



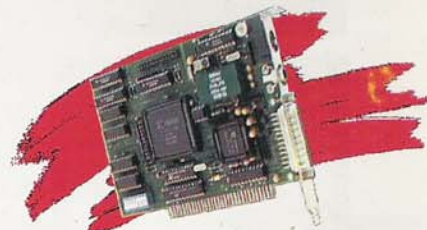
Sirius-Genlock

Semi professional genlock with fading, superimposing, bypass, RGB-control, autom. colorsplitter, composite to S-video and vice versa transcoding. Now including Scala 500 Junior and 20 Paragon Fonts especially for video titling!



Pegasus PC-Video

This product converts the VGA signal from your PC into PAL video signals, Y/C and composite! Create titles or graphics on your PC and record it with your VCR. The VGA output can be used simultaneously.



Genlocking with any PC! All the Electronic-Design Genlocks can be used on the PC as well with the Pegasus PC - Video!

28 minutes about desktop video on VHS \$ 29,95 or S-VHS \$ 49,95

Authorized Australian Dealers

Computer Discounts
8 Shepherd St.
Broadway 2008 N.S.W.
Call: (02) 281 74 11

Amitech
Shop 9 / 2A Surf Road
Cronulla, 2230 N.S.W.
Call: (02) 544 1874

Computa Magic P/L
44 Pascoe Vale Road
Moonee Ponds. 3039 VIC
Call: (03) 326 01 33

Maxwell's Computer Center
162-164 Nicholson Street
Abbotsford, VIC 3067
Call: (03) 419 68 11

Phoenix Microtechnologies
18 Hampton Road
Kewick 5035 S.A.
Call: (08) 293 87 52

Video&Audio Brisbane
45 Sherwood Road
Toowong, QLD 4066
Call: (07) 870 03 00

Video&Audio Gold Coast
18 Scarborough Street
Southport, QLD 4215
Call: (075) 91 42 24

The Floppy Shop
99 Charles Street
Moonah 7009 TAS
Call: (002) 73 06 06

Electronic-Design

*Technology
you can see*

D-80935 Muenchen Detmoldstr. 2a Call: + 49-89 / 354 53 03 Fax: +49-89 / 354 56 74